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Part First.

ORIGINAL COMMUNICATIONS.

I.—THE SCIENCE OF HUMAN ANATOMY: ITS HISTORY AND DEVELOPMENT.

(An Introductory Lecture to the Course of Anatomy, delivered at Surgeons' Hall on 29th October 1884.)

By J. MACDONALD BROWN, M.B., F.R.C.S.E., F.R.C.S. (Eng.), Lecturer on Anatomy at Surgeons' Hall, Edinburgh, and Surgeon to the Western Dispensary.

GENTLEMEN,—In the pursuance of the study of any science, nothing appears to me to contribute more towards a thorough understanding of the subject, or to be of greater advantage to the student in his acquirement of it, than a brief review of its antecedents. I have therefore deemed it expedient to select as the most fitting subject for my introductory lecture, "The Science of Human Anatomy: its History and Development," and I shall endeavour to make my remarks to you to-day of a more general and interesting character than can be embraced in the practical and systematic teaching of a class. The value of such a subject is enhanced by the consideration, that it will bring within its compass a retrospect of the noble and useful services which in the past have been rendered to the science of anatomy by the teachers of the Anatomical School in Edinburgh.

It would be impossible in the time at my disposal to enter, with the necessary sequence and minuteness, into an examination of scientific discovery in its successive stages, and I shall therefore treat the subject more from its teaching than from its scientific point of view. The story of anatomy, like that of many other sciences, is a very old one. Its birth is wrapped in the mists of antiquity. The history of the world in the infancy of civilisation has furnished no exact record of the dawn of anatomical investigation. Scientists who have been led to consider this science in its antiquarian aspect have found that their endeavours to penetrate the darkness have been a comparatively fruitless task, and the result of their researches has been the conclusion, based almost purely on inductive evidence, that the probable birthplaces of anatomy were in India and Egypt,—countries which in ancient times possessed a very advanced civilisation. As regards India, nothing having a definite relation to the science is known. The knowledge which the Egyptians acquired of the structure of the human body was entirely traceable to the custom of embalming practised in their country. Such knowledge was, from the nature of the process, necessarily of the most rudimentary description. Up till within a period of five centuries before the Christian era, all information regarding the science of anatomy is of a traditional or mythological character. What may more properly be called the history of the science begins with the advent of Hippocrates, who has been designated the father of medicine, and who flourished about 450 years B.C. His general knowledge of anatomy was confined chiefly to the osseous system, and in that and other branches it was very elementary and often erroneous. Somewhat less than a century later the writings of the famous Aristotle appeared. This celebrated man was more of a philosopher than a scientist, and his works on the subject partake more of a speculative than of a practical character. He, however, deserves a prominent place as a pioneer in the march of anatomical science, as he may justly be considered to have laid the foundation of comparative anatomy, which in the natural progress of things must have preceded a knowledge of the human body.

To Herophilus, who comes forty years later, is due the credit of having founded Human Anatomy. He is stated to have dissected human bodies extensively; but his works having been lost, all that is known of his anatomical researches is gathered from the writings of others. To the parts which still retain them, he gave the names of calamus, scriptorius, and duodenum, and his memory is perpetuated in the mind of every medical student in the *Torcular Herophili.* A contemporary of his named Erasistratus made some valuable discoveries in the poietic and nervous systems.

During the 200 years which followed, the study of this science seems to have fallen into neglect; but it is probable that throughout this period many anatomists lived and worked of whom nothing is known. Anatomy and its teaching were revivified under the celebrated Roman physician Galen, about the middle of the second century. Probably no anatomist ever laboured more assiduously or wrote more voluminously in the interest of his subject than did Galen. Although his osteology is fairly accurate, and his knowledge of the other systems good, yet he, more than any other member of the older school, gave currency to errors which were not eradicated for centuries afterwards. A careful observer, his anatomy was chiefly comparative; and from that standpoint he described the human subject analogically rather than practically. What is known in history as the Dark Ages succeeded the period of Galen, and for 500 years the science of anatomy suffered in the almost total annihilation of civilisation caused by the incursion of barbarians into the civilized world. Indeed, with the exception of the Arabs, who revived the science to some extent, especially in Spain, the progress of anatomy was, until the beginning of the 13th century, practically at a deadlock.

About 1213, Martianus, in Italy, restored anatomy to its place as a practical study. Mundinus, at Bologna, a century later, flourished as a celebrated anatomist, and wrote a text-book on the subject. By him was devised our present method of differentiating the intestinal tube into duodenum, jejunum, ilium, colon, and rectum. Early in the 16th century Vesalius gave a new impetus to anatomical study. Differing in that respect from Galen, Vesalius was eminently a practical scientist, and the result of his labours was the production of one of the most elaborate works ever published on the subject. He exposed and corrected most of the errors taught by Galen, and the creation of the firm basis on which anatomy at present rests was owing in a very great measure to his labours. While many anatomists of much less distinction have their monuments in the nomenclature of anatomical science, only an insignificant foramen in the basis cranii is named after this celebrated scientist, viz., the "Foramen Vesalii," a foramen not infrequently absent altogether. Eustachius, his contemporary, and Fallopius, his pupil, though less distinguished, were eminent teachers.

About the middle of the century Varolius made careful investigations with reference to the brain and nervous system. Sylvius and Servetus, anatomists of some eminence, also flourished about the same time.

In summarizing the history of anatomical science up to this point, its development and progress can be traced with considerable accuracy. The main feature of its advance is the fact that it has gone hand in hand with civilisation. With the tide of civilisation it migrated from eastern to western countries. From India and Egypt it went to the Greek and Roman Empires. After their decadence it accompanied the Arabs to Spain. Still later we find it among the Italians, and finally it obtained a permanent home in Western Europe,—in France, Germany, and Britain.

Under the fostering influence of western civilisation, the advancement of the science made rapid progress.

In Edinburgh, as early as 1505, dissection of the human body was practised by the surgeons of the day, under certain restrictions imposed by the Town Council. Unfortunately no record has been preserved of the results of such dissections during the period of nearly 200 years subsequently.

The year 1628 marked an important discovery in anatomical science. In this year William Harvey, a London physician, first definitely established the theory of the circulation of the blood, which theory had been regarded by former anatomists only as a probable conjecture. The awarding of the palm of the discovery to Harvey was the cause of great and animated discussion, both in his own time and at subsequent periods. Indeed, only recently Professor Scalzi of Rome warmly disputed Harvey's claim to the discovery, but his objections were effectually disposed of by Professor Johnson, of King's College, London.

Later in the 17th century, Bartholin, Steno, Malpighi, Meibomius, Santorini, and others on the Continent, and Glisson, Wharton, and Cowper in England, rendered important services in the furtherance of the science.

In Gairdner's *Historical Sketch of the Royal College of Surgeons of Edinburgh*, we are informed that in 1694 Alexander Monteath obtained from the Town Council a gift of those bodies "that dye in the correction-house, and of the bodies of foundlings that dye upon the breast." The gift also included a room for dissections, and the use of the College churchyard for the burials. The grant was made under various conditions, one of which Gairdner tells us was that he (Monteath) was "to attend the poor gratis, but to be paid for his drugs at prime cost." Other curious conditions were attached to the grant, which are worth a passing notice. The dissection was only to be performed in winter. All the "gross intestines" were to be buried within forty-eight hours, and the rest of the body within ten days. The same privilege was latterly extended to other members of the profession, and the bodies of the unclaimed dead were included in the grant. An anatomical theatre was built soon after the date of the grant to Monteath.

The limited time at my disposal precludes me from tracing in detail the history of the science in the countries of the Continent, and even in our sister country of England, and two or three words at a subsequent stage of my remarks must suffice to dispose of this wide range of the subject. With that exception I shall confine myself to that branch of the history which relates to the progress of anatomical teaching in Edinburgh.

In the earliest period of the history of our Anatomical School there was no distinction between extramural and intramural schools. Indeed, of these two schools, the intramural was founded considerably later than the extramural, and its teachers were supplied from the College of Surgeons.

Between the time of Monteath and that of the first Munro, various anatomists flourished as teachers in Edinburgh. Some of these are only remembered by their names, while we are in possession of but very imperfect biographical sketches of others. As this period is therefore barren in anything of historical importance, I shall bridge it over with this passing reference, and shall bring you to the more certain and important historical vantage-ground which is ushered in by the advent of the great Munro in 1720.

The life and teaching of Munro *primus* have been the subject of many expositions. He taught for five years in Surgeons' Hall, and in 1725 was appointed to a chair in the University. This ointment was the result of an application by him for premises

in the University, which was rendered necessary on account of the threatened demolition of his rooms in Surgeons' Square by a city mob incited by the supposed violation of churchyards.

The principal characteristic of his teaching was, that it was not confined to human anatomy. The range of his lectures was very comprehensive, and included Comparative Anatomy, Surgery, and Physiology.

His contribution to the literature of the science in the shape of his famous work on Osteology is too well known to require more than a mention. In view of the difficulties with which he had to contend in popular prejudice and superstition, and realizing the fact that, despite these obstacles, he most firmly established the teaching of anatomy as a science in our city, it must be ungrudgingly conceded that the title so often accorded him of "father of the Edinburgh Medical School" is most justly bestowed. He taught for a period of thirty-eight years, and was succeeded by his son, generally known as Munro *secundus.* Though less famous than his father, this anatomist, by his careful and systematic teaching, did much to add lustre to the reputation of the Edinburgh Medical School. His professoriate extended over twenty-five years, and his published works are numerous.

During this century, Cheselden and the two Hunters (William and John) rendered effective service to the cause of anatomy in England; while on the Continent the researches and teaching of Morgagni, Valsalva, Winslow, Albinus, Haller, Meckel, Wrisberg, Sœmerring, Reil, Bichat, and others, greatly advanced the science.

During the latter period of the second Munro's teaching, John Bell founded an Anatomical School near old Surgeons' Hall (1790). Bell's fame rests more on his eminence as a surgeon than as an anatomist, but it cannot be doubted that as a teacher of anatomy he was eminently successful. His published works form a valuable contribution to anatomical science. His period of teaching lasted only for a few years. He was succeeded by his brother Charles (afterwards Sir Charles Bell), who taught anatomy for about four years. Neither of the Bells attracted large anatomical classes, but this was not matter for surprise in view of the great popularity of their intramural rival, Professor Munro *secundus.*

Munro *tertius* succeeded his father in 1808 as Professor of Anatomy. During his term of office the reputation of the Edinburgh University as an anatomical centre considerably declined. The third Munro seems to have lacked the teaching power which his two predecessors possessed in such an eminent degree. He occupied the chair for thirty-eight years, and has left behind him numerous published works.

The famous John Barclay was a contemporary of Munro *tertius.* This celebrated anatomist taught from 1797 to 1825. At this period, therefore, there existed three Anatomical Schools in Edinburgh. These were that of the University taught by Munro, the school of the Bells, and that of Barclay. For a considerable period the lectures of Barclay did not receive the recognition of the Colleges of Physicians and Surgeons. Subsequently, however, he became a most popular teacher, and his class almost rivalled in numbers that of the University. He was the first specialist in anatomy in Edinburgh. The distinguishing characteristics of his teaching were its carefulness and impressiveness. The absorption of his mind in his subject appears to have been so complete, that it has been recorded as not an uncommon occurrence for him to proceed with his lecture after the dispersion of his class. He was the author of several anatomical treatises.

In 1808 Dr John Gordon began his unfortunately brief career of ten years as a teacher of anatomy in Edinburgh. He carried on a rival school next door to Barclay. A careful and able anatomist, he managed to secure a good class, in spite of the strong teaching opposition with which he had to compete.

The names of Innes, Fyfe, Walker, Craigie, and Cullen, who about this time did good service to the cause of anatomical teaching in Edinburgh, only call for mention.

This brings us to the time of one of the most celebrated anatomists which Edinburgh ever possessed, viz., Dr Robert Knox, who began to lecture before the retirement of the third Munro in 1796. Knox was essentially a morphologist, and treated human anatomy not so much *per se* as in its relation to comparative anatomy. Under him the reputation of the Edinburgh Anatomical School more than recovered the ground which it had previously lost. In that adaptability of teaching which combined the qualities of orator and teacher, Knox's position was unique in its character. The diversity of his genius places him in a niche much higher than that of a mere instructor and expounder of a science. His fluent and impressive manner of delivery, his perfect inflexions of voice, his masterly rhetoric, his fine descriptive power, and his keen and ready wit infused new life into the dry bones of anatomical detail. His lectures attained an unprecedented pitch of popularity, and in the session of 1829–30 the number of students attending his class was 504. The greatness of Knox was, however, marred by prominent weak points of character, which rendered his popularity transitory. Its decline, taken in conjunction with the odium caused by his supposed connexion with the Burke and Hare murders, induced him to relinquish anatomical teaching in Edinburgh. He went to London in 1845, did not, however, succeed there, and died in obscurity eighteen years afterwards.

We have seen that up till this time there existed in Edinburgh various contemporary schools of anatomy, conducted by teachers of more or less eminence. Some of the most famous names which adorn the pages of anatomical literature are to be found among Knox's contemporaries and successors. Some of these carried their fame and teaching to other centres of learning, such as Lizars, Allen Thomson, Sharpey, and Struthers. Others, like Syme and Spence, left the field of anatomy for the still wider one of surgery.

Syme and Allen Thomson—the former in 1824, the latter in 1841—only taught anatomy for the period of one year respectively. Lizars, an anatomist of the highest eminence, whose work and writings have not in the past received the recognition which they deserved, taught anatomy in Edinburgh for something like twelve years, beginning about 1828. That he was a teacher of marked ability and earnestness is acknowledged by the ready testimony of many of his pupils who still survive. In connexion with his work as an author and scientist, his valuable collection of anatomical plates, and his admirable compendium of Human Anatomy, and many other lesser treatises, bear the impress of great originality and merit.

Passing over several teachers of less note, we come to Handyside, an able and conscientious teacher of anatomy, who commenced his lectures in 1833, and continued to lecture for nine years, when he relinquished the position in favour of Struthers, now the distinguished Professor of Anatomy in Aberdeen. In 1846, on the resignation of Munro *tertius*, Handyside and John Goodsir were candidates for the University chair, with the result that the latter was successful.

After Struthers' removal to Aberdeen, Handyside again became Lecturer on Anatomy at Surgeons' Hall, and continued as such up till the period of his death in 1881, when my immediate predecessor, Mr Charles W. Cathcart, succeeded him.

Amid the host of anatomists of recent times, the name of John Goodsir stands out pre-eminent. His life and labours are, however, so well known, and have been so carefully and lovingly recorded by his biographer in his published anatomical memoirs, that I need not do more than furnish a cursory sketch of his work and teaching. A pupil of the great Knox, he from his earliest student days was an earnest devotee of anatomy, human and comparative. He possessed that wonderful power of clothing the dry bones with muscle and nerve, which invested the subject with a living interest to every student. For twenty years he adorned the chair of Anatomy in the University of Edinburgh, and died in 1867, when the present professor was elected to the office.

The following extract from the obituary of a London newspaper would most fittingly sum up this brief sketch:—"Since the days of John Hunter no greater master of anatomical science, no keener investigator of phenomena, no more comprehensive grasper of generalizations, no clearer or more effective expositor, ever dedicated himself to the great subject of anatomy, human and comparative, than John Goodsir. . . . . It is, indeed, impossible to estimate aright the loss which scientific knowledge and academic education sustain through such a death as his. Let us hope that the generous contagion of his teaching and the lustre of his example will arouse in some worthy disciple the masculine enthusiasm, the noble candour, and the chivalrous self-devotion which are buried in the too early grave of John Goodsir." He has left behind him a number of works upon anatomy, human and comparative, all of which afford evidence of his conspicuous originality and genius.

Among the various extra-academic teachers of anatomy of recent times was the late Professor Spence, whose memory deserves more than a mere passing tribute. As a young man he grasped the great conception that anatomy is the handmaiden of surgery, and that to be a skilful surgeon a man must first be an anatomist. As an anatomist Professor Spence's work and teaching were of the highest order, and his dissections of the arterial system in various parts of the body—some of which adorn the present University Museum of Surgery—afford ample evidence that he was a practical anatomist of the greatest ability. His period of teaching as a pure anatomist lasted only for the brief period of three years. In his capacity of surgeon that of anatomist, however, was never lost, and his surgical teaching was always remarkable for its accuracy of detail, more particularly in its anatomical aspects.

I have thus attempted, gentlemen, to give you a brief sketch of the teaching of anatomy down to the present time. Permit me now to say a word regarding its probable future. *Anatomy is essentially a practical science!* Lectures, no matter how clear and illustrative—demonstrations, no matter how perfect, form only accessories to the acquirement of anatomical knowledge.

In order to learn anatomy thoroughly and well, a student must not only have ample opportunity for examining dissections of the various regions of the human body, but he must also, as far as possible, dissect each of the regions for himself. This great truth has been at all times acknowledged by anatomists. By the aid of diagrams and dissections a man may acquire a good knowledge of Scarpa's triangle; but he can never attain that practical familiarity with the anatomy of that region, so essential to the practical surgeon, unless he has patiently and carefully dissected out for himself its relations and the structures which it contains. There are two factors which are essential to the possession of sound anatomical knowledge,—in the first place, an efficient system of teaching, and in the second place, a sufficient supply of material. As regards the former, the long list of celebrities who have laboured in the cause of anatomy affords a sufficient guarantee that, in our school at least, the first factor has been hitherto represented in no mean degree.

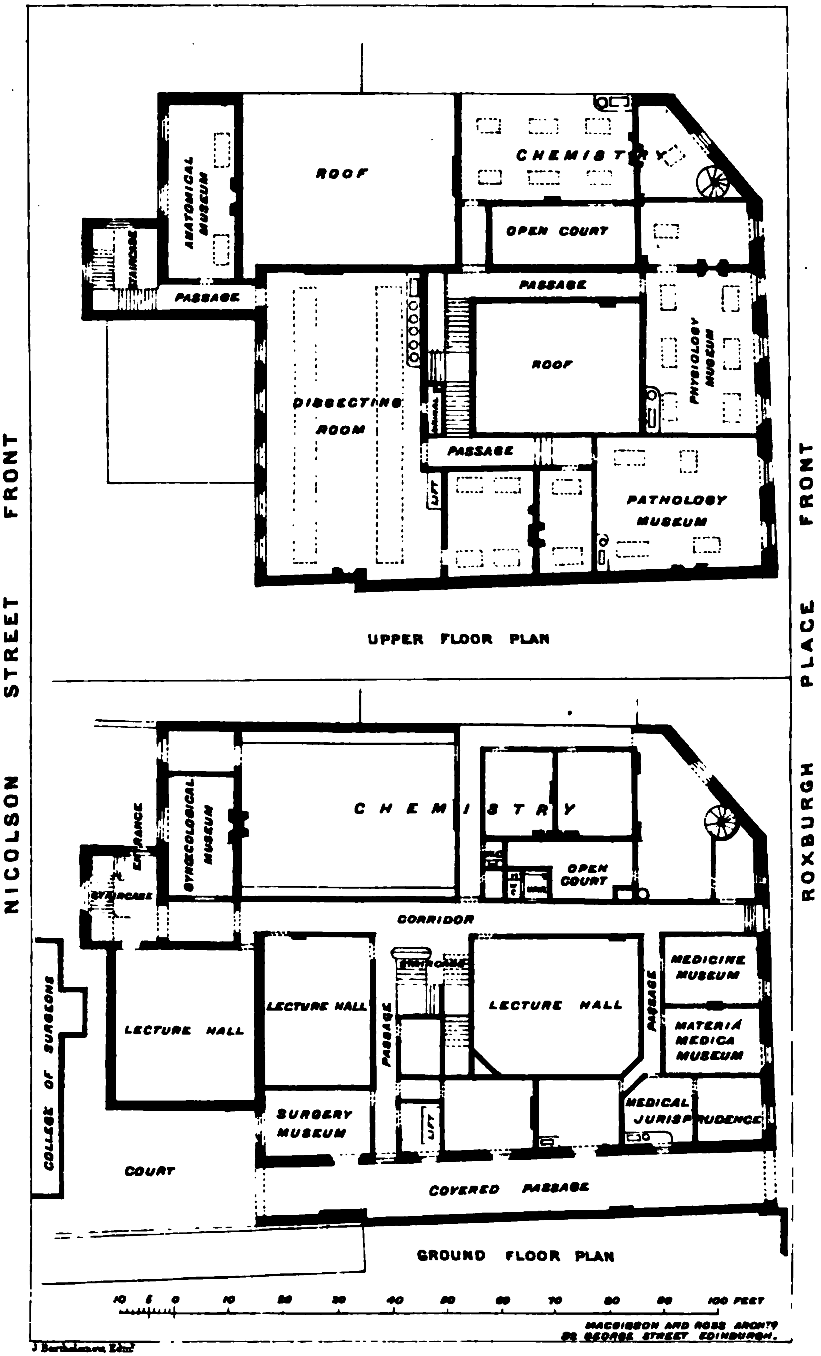
In dealing with the second factor, or the material supplied for dissection, I cannot speak in such favourable terms. The meagre supply of subjects for dissection, in nearly every period of the history of anatomy, has been the main obstacle to the advancement of the science. In the earlier stages of anatomical history, the necessary supply was withheld by the ignorant superstition of the times. While in our own day anatomical schools elsewhere have been amply supplied with the necessary material, those in Edinburgh have suffered from its dearth. This insufficiency in the Edinburgh school has been the cause of no small hindrance to the cultivation of the science; and, taking into consideration the present immense and steady increase of students of anatomy, we cannot but regard with apprehension the problem of how the supply is to keep pace with the demand. We must hope that future legislation will so modify the existing laws and customs as to enable us to be at least on an equal footing with other anatomical schools.

Gentlemen, I have attempted to give you an outline sketch of the history and development of anatomy and its teaching, which has been of necessity brief; and I have dwelt more particularly upon the subject of our own school. I have also indicated the hindrances which have impeded, and do still impede, its progress. In addition to what has been already mentioned, nothing has hitherto interfered more with the successful study of anatomy than the want of efficient accommodation for practical work in this and in other schools. The dissecting-rooms of former Edinburgh schools were of the most unsuitable description,—they were badly ventilated, insufficiently lighted, and their accommodation was most inadequate. The immense strides which have been made within the past few years, as regards the provision for practical work in the various departments of medical science in Edinburgh, have nowhere shown themselves more strikingly than in the department of anatomy. In no anatomical school in this country is such accommodation provided for the study of practical anatomy as in this city. The palatial rooms of the New University, and the equally efficient though less pretentious ones of Surgeons' Hall and Minto House, afford to the student of practical anatomy unrivalled advantages for the successful prosecution of his studies.

Gentlemen, this naturally leads us to consider the changes which have taken place in Surgeons' Hall since last an anatomical class met within its walls. Surgeons' Hall Medical School was erected by the Royal College of Surgeons of Edinburgh in 1849, and owes its foundation largely to the untiring energy and activity of Professor Struthers of Aberdeen, then an anatomist in Edinburgh. Viewed in the light of the condition of medical science at that time, its accommodation and appointments amply served their purpose. Causes, however, have been at work, which, since its foundation, have altered this state of matters. One of these is the steady advancement which has taken place in all branches of medical science since that time, more especially in the direction of their practical study,—an advancement which has called for larger accommodation in the various departments. Another cause has been the increased and increasing number of students who have been, and are still, attracted to this school from all parts of the world. An additional cause is to be found in the natural decay which the hand of time has produced on the buildings.

Matters continued in this unsatisfactory state until the present year, when, by the consideration and generosity of the College of Surgeons (under whose auspices I am privileged now to address you), active steps were taken for improving and remodelling the buildings to meet the requirements of the various lecturers. The result is that Surgeons' Hall ranks second to none among the schools of medicine in Edinburgh in its appointments, accommodation, and conveniences. Until the present year there was no accommodation for the study of the practical departments of physiology and pathology, and the condition of the dissecting-room was bad in the extreme. In our present building these defects have been most effectually remedied, and the remaining departments have been more amply provided for. The class-rooms are better lighted and more efficiently ventilated. Laboratories for practical physiology and practical pathology have been added. The chemical section has been extensively altered and enlarged, while the various museums in connexion with the classes of Materia Medica, Pathology, Medical Jurisprudence, etc., have been remodelled. It is, however, in the anatomical department that the greatest improvements have taken place. Many of you present will vividly remember the condition of the late dissecting-room in Surgeons' Hall. Having traversed a ricketty wooden stair, you found yourself in a small, low-roofed, badly-ventilated, and often strongly-odorous room. In it the student was in summer subjected to the most oppressive heat, and in winter to the most extreme cold. I believe in its last days that in rough wintry weather one could enjoy the full benefit of a small snow-storm in one corner, and of a gale of wind in another. The anatomical museum was small and incommodious.

The changes introduced by the improvements which have taken place can only be called a transformation. The fact that the work has been accomplished in the incredibly short period of 2½ months affords the highest testimony to the energy of the contractors, and to the marked skill of the eminent firm of architects, Messrs M'Gibbon & Ross, who in their designing of the various alterations have most thoroughly succeeded in meeting the requirements of the individual lecturers. Instead of the wooden stair previously referred to, there is now a wide and easy stone stair in the centre of the building, well lighted from the roof, and leading by two branches to the departments of Anatomy and Pathology on the one hand, and to those of Chemistry and Physiology on the other. A substantial stone staircase has also been introduced, adjoining the entrance to the school, which affords a separate and convenient access to the anatomical museum and dissecting-room. The new anatomical museum has been built over the gynæcological one. Advantage has been taken of this addition to heighten and improve the general appearance of the building from the front. Having reached the landing, and having passed the museum upon the left hand, the dissecting-



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room, which has thus two approaches, is entered. It is a spacious hall, the area of which is well-nigh double that of the old one. It is surmounted by a lofty ornamental iron roof, and its walls are lined with wood. As regards lighting, I can fearlessly assert that it has no compeer in this city. Its ventilation is perfect. This has been effected by the employment of Stevens' patent, and by the construction of many of the windows in such a manner as to admit of perfect ingress and egress of air. The room is well heated from the two large fireplaces; there is an abundant supply of water, hot and cold; and the arrangements of cloak-room, lavatory, urinals, etc., leave nothing to be desired. Cases for anatomical dissections and preparations are ranged round two sides of the room, and one of its corners is occupied by a series of rows of fixed seats arranged in class-room style. By means of the latter, a large number of students can receive a practical demonstration during dissecting hours without interfering with the ordinary routine work of the room. On the ground floor of the building improved accommodation has been afforded for the storage of subjects for dissection, while a lift from these premises gives them free communication with the dissecting-room. A perusal of the accompanying plate will more fully explain the present disposition of the building. I have introduced this description of our school, not only because you as its students ought to be acquainted with its details, but also because its present anatomical department marks an important step in the progress of anatomical science and its teaching.

Let me conclude with one or two observations for your practical guidance in the prosecution of your studies.

I am confident that the special facilities which you as students of this school now enjoy will have the most promising practical results. Facilities are afforded you for acquiring a thorough proficiency in the principles of anatomy, and opportunities are at your command for the further development of the science, which less favourable circumstances denied to your predecessors. With the introduction of every modern appliance and convenience for the purposes of investigation, combined with every possible comfort in other directions, the success of this school, which is entrusted to your keeping, ought to be assured.

For the reputation and success of our anatomical school, two requirements are indispensable. The first of these is that the teaching should be characterized by the utmost carefulness and accuracy. The second essential is a corresponding industry and an intelligent observation on the part of the student. I, together with my demonstrators, will earnestly endeavour to fulfil the first of these conditions; and I can confidently appeal to you to enter upon your studies in the spirit necessary to the faithful performance of the second condition. It is of the utmost importance for you to remember that the true utility of this science is to be found in its recognition as the only foundation upon which in the future you must build your knowledge of surgery and medicine. That your excellence in these departments may be worthy of your profession, it is indispensable that this foundation should be carefully laid by the cultivation of this science to its highest degree of accuracy and perfection. Your familiarity with its subject-matter ought to be of such a perfect kind that in your future career as physicians, you will regard the body of a patient as the case which encloses important viscera and organs, with the disposition and functions of which you are intimately acquainted; and in your practice as surgeons that you will view a patient's limb as a structure composed of bones, jointed together by ligaments, moved by muscles, and supplied with bloodvessels and nerves, with the various positions and relations of all of which you are thoroughly conversant. Philosophers have pointed out that one of the most useful lessons in life is to be found in the discipline which is implied in the careful attention to detail. A well-known writer has said that the "ignominious love of detail" has been the foundation of all greatness. Of all sciences anatomy is one which requires for its effective pursuit the careful mastery of detail. It is possible that the student may sometimes find the dry minutiæ a "weariness to the flesh;" but such a feeling cannot long co-exist with a true estimate of the value of this subject, and with the ever-present conception of the object which he has in view. You will reap advantage from your anatomical studies in a wider than a mere professional sense. When you arrive at the completion of the different links in the chain of anatomical information, you will find ample material for admiration in the wondrous geometrical and mechanical accuracy with which every part of the human body is constructed to carry on the animal economy and answer the various purposes of life.

Gentlemen, if you will earnestly investigate anatomical truth, not only for its own sake, but also on account of its important relation to medicine and surgery, I am confident you will be able to trace much of your professional success in the future to the carefulness with which you have conducted your anatomical studies in the past.

II.—SOME LOCAL CAUSES OF FŒTID BREATH.

By P. M'Bride, M.D., F.R.C.P.E., F.R.S.E., Surgeon to the Ear and Throat Department of the Royal Infirmary, Edinburgh, and Lecturer on Diseases of the Ear and Throat, Surgeons' Hall.

(*Read before the Medico-Chirurgical Society of Edinburgh, 5th November* 1884.)

Fœtor of the breath is a symptom which may occur under such a variety of circumstances that a full consideration of the subject would carry one far beyond the limits of a paper.

The expired air may acquire a disagreeable odour from pulmonary or laryngeal disease, from mineral poisons, from ulcerations of the mouth, or from the presence of decayed teeth. All these and other conditions to which the symptom in question may be due are doubtless well known to all present.

There are, however, three frequent causes of fœtid breath which are perhaps less fully understood, and which may therefore prove of interest to members of this Society, namely—

(1.) Follicular Tonsillitis (Chronic).
(2.) Ozæna.
(3.) Catarrh of the Tongue.

Chronic Follicular Tonsillitis.—In this affection the crypts of the tonsil are the parts which are most affected. The mucous membrane which lines them pours out a secretion which tends to become inspissated and afterwards to decompose. As a result the appearance on examination is that of a white patch situated on the surface of the gland. If the adjacent part of the latter be pressed upon, a white pellet is extruded, composed of decomposing organic matter, and having consequently a fœtid odour. When the pathology of this condition is once understood, the indications for treatment become plain. When the crypt has been emptied of its contents an unhealthy or catarrhal state of its lining membrane remains, and probably the best application is the introduction of a thin probe which has been previously covered with nitrate of silver. Attention to the general health and to the adjacent mucous membrane may also in some cases expedite the cure.

Let us now turn to another and more important affection, viz.—

Ozæna.—The term ozæna is used in two distinct senses. To some it signifies a definite disease characterized by certain well-marked pathological and clinical features, of which however ulceration is not one. By others any fœtid discharge from the nostrils is spoken of as ozæna; or, in other words, the name is applied, not to a definite morbid condition, but to a symptom which may occur in the course of various diseases. Thus, syphilitic and, according to some, scrofulous ulcerations of the nose may in themselves produce a flow of fœtid pus, or they may be the immediate causes of caries and necrosis of the nasal bones. Then, again, an impacted and perhaps long forgotten foreign body, or a nasal calculus, may be the origin of the symptom in question. Primary malignant disease of the nasal cavity and glanders, both rare affections, are also associated with ozæna when used in this less exact sense. Strumous ulceration of the nasal mucous membrane is rare except in childhood, and its very existence seems to be called in question by some. Syphilis, on the other hand, if present, can usually be detected by means of a careful examination; yet every practitioner has met with cases of fœtid nasal discharge in which a specific taint could with certainty be excluded, and in which the condition was due to true ozæna or atrophic nasal catarrh, an affection which is much more common than most of the conditions alluded to, and which is rarely or never accompanied by ulceration. The object of my remarks so far has been to show how necessary it is to make a careful objective examination of the nasal cavity in every case by means of a speculum and reflected light, or, if necessary, by means of posterior rhinoscopy; and, having arrived at this conclusion, I shall enter into a more detailed account of true *ozæna or atrophic nasal catarrh.*

As the clinical features of this disease are well marked and admit of no dispute, I shall begin with a short description of the most prominent of these. The affection usually begins in early life, most commonly about the age of puberty, and the first symptom to attract attention is usually a fœtid smell observed, not by the patient, but by those who come in contact with him. An inspection of the nasal cavities by means of a bivalve speculum and reflected light is usually sufficient to establish a diagnosis. The most prominent characteristic noticed by the observer is extreme roominess, and a closer examination enables him to detect that this is due to diminished bulk of the turbinated bones—more particularly the inferior. Frequently the view is obstructed by quantities of grey or greenish crusts, which can, however, be washed away by means of a spray, while again in other cases there is little evidence of excessive secretion. It is true that one or two cases have been reported in which no such evidence of atrophy of the mucous membrane could be detected; but, as Mackenzie remarks,[1] "Limited atrophy might easily have existed in some situation not accessible to view." As to the cause of this atrophy, the weight of evidence seems to show that it is usually secondary to hypertrophy, the result of chronic inflammatory thickening. During the latter process, I take it, the mucous membrane is infiltrated with quantities of round cells, which, however, tend to lengthen into spindles; gradually this change results in the formation of a quantity of fibrous bundles, which by their pressure cause atrophy of adjacent tissues, including the spongy bones.[2]

As to the cause of the marked fœtor, which is the most distressing and prominent feature of the disease, opinions differ, and many theories have been advanced. Thus, Michel (*Krankheiten der Nasenhöhle*), by an ingenious line of argument, based principally on a process of exclusion, advances the hypothesis that the objectionable odour is due to the presence of decomposing secretion in the sphenoidal and ethmoidal cells. While, in a very small minority of cases, this condition may exist, the great bulk of pathological evidence is against this view,[3] which is, however, also held by Bosworth.[4] Krause,[5] as a result of two post-mortem investigations, states that in addition to a fibroid and consequent atrophic process, which tends to destroy the gland structures of the nasal mucous membrane, there is an enormous infiltration of round and spindle cells which show marked evidence of fatty degeneration; and to the resulting formation of fatty acids he ascribes the fœtor. In the discussion which followed, however, E. Fränkel, of Hamburg, stated that in three cases observed by him the fatty condition was absent. Again, other observers believe that atrophy of the glands of the mucous membrane is the immediate cause of the symptom in question. Probably the most satisfactory view in the present state of our knowledge is that expressed by B. Fränkel, of Berlin, who maintains that it is necessary to assume the presence of a specific ferment in cases of ozæna to meet the fact that atrophic catarrh sometimes, though rarely, exists without fœtor. The last theory to which it is necessary to allude is that advanced by Zaufal, that the tendency to decomposition is due to diminished growth of the turbinated bones, and the widening of the nasal passages consequent thereon, which diminishes the force of the respiratory current of air, and tends thus to favour the retention of secretions. That there is a certain element of probability in this view will be evident to all; but that the widening of the nasal fossæ is due to retarded development alone is extremely unlikely.

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[1] *Diseases of the Throat and Nose*, vol. ii. p. 329.

[2] *Zuckerkandl Normale und Path. Anat. der Nasenhöhle*, p. 87.

[3] Compare Zuckerkandl, *op. cit.*, pp. 93, 94.

[4] *Diseases of the Throat and Nose*, p. 227.

[5] *Transactions of International Med. Congress*, 1881, vol. iii. p. 312.

A consideration of all these views then leaves us only in a position to say that ozæna is associated with atrophy of the nasal mucous membrane. If the secretion be examined in its fluid state, it is found to consist of pus cells and enormous quantities of bacteria.

The predisposing causes of ozæna are still uncertain; for while some authors have found this atrophy of the nasal mucous membrane to originate more frequently in those of a strumous or specific constitution, Mackenzie[1] says, "In adults dry catarrh shows no special disposition to affect the strumous. I have met with only three cases in which there was any evidence of hereditary syphilis, and I only know of three in which ozæna, without ulceration, has followed acquired syphilis."

For the treatment of ozæna an enormous number of drugs and applications have been suggested. Attention to the general health should of course, in many cases, accompany local medication, but to the latter we must look as our sheet anchor.

There can be no doubt that the most effectual method of treatment consists, in the first place at least, in thorough cleansing of the whole nasal cavity; and although douching and syringing are much used, I do not believe that these can be at all compared with the anterior nasal spray, as used at the London Throat Hospital, either in point of efficacy or safety. While agreeing with those authors who believe that ozæna is often incurable, yet I am also of opinion that in most cases the fœtor, which is after all the only symptom calling for interference, can be kept in check for an indefinite time by the methodical use of appropriate sprays. According to my own experience, the most satisfactory results are derived from the use of an alkaline and antiseptic spray, immediately followed by one containing as much tincture of iodine as the patient can bear, which usually does not exceed five minims to the ounce. The alkaline spray, of course, washes out all parts of the nasal cavities thoroughly, and leaves a perfectly clean surface for the remedial effects of the iodine, which probably acts in its double capacity of antiseptic and stimulant. Some authorities prefer to apply their remedies as powders, and the most important of these latter are iodoform, boracic acid, and eucalyptus (diluted with starch); while others resort to a gelatine bougie as a vehicle for introducing medicinal agents into the nares.

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[1] *Diseases of the Nose and Throat*, vol. ii. p. 327.

Gottstein, finding that it was only the dried secretion which gave forth the disagreeable characteristic odour, has suggested plugging the nares with cotton wool for a time varying from two to twelve hours, and this method may be worthy of imitation in cases where the spray treatment has failed. The inhalation and ejection through the nose of creasote vapour may also be followed by benefit, and by relief from the feeling of dryness which is sometimes complained of. Whether in obstinate cases the treatment may be aided by the internal use of sulpho-carbolates I do not know, although, arguing from analogy, one might expect a beneficial effect from the employment of this drug.

The next, and I believe by far the most common, cause of fœtid breath is catarrh of the tongue.

Catarrh of the Tongue.—Furring of the tongue is so common and so frequently associated with robust health, that its pathological nature has been almost lost sight of, except, indeed, when it occurs as a symptom of general disease. Yet the frequent catarrhal origin of this condition cannot, I think, be denied, although at first sight the objective appearances are somewhat unlike those usually presented by inflamed mucous membranes. In the œsophagus, however, it would seem that chronic superficial inflammation tends to produce a desquamative process analogous to that so often seen in the skin;[1] and when we consider the analogy of structure between the mucous membrane of the gullet and that covering the tongue, and, moreover, the fact of the intimate relation which subsists between these two organs, it is difficult to avoid the conclusion that a similar analogy will subsist between their pathological conditions. Another strong argument in favour of the inflammatory origin of furred tongue, if further proof be needed, is the fact that during local acute affections of the tonsils, pharynx, etc., where the whole mucous membrane participates to some extent, the tongue is always thickly coated. All this notwithstanding, we find little allusion to tongue catarrh in any of our standard works. Among specialists, Michel alone, so far as I know, refers in a footnote to the differential diagnosis between this condition and ozæna,[1] stating that he has observed it as a cause of fœtid breath; while Niemeyer[2] writes, in his article on "Oral Catarrh," as follows:—"The foul taste, or more correctly the foul smell, is not solely a subjective symptom; generally other persons perceive a fœtor from the mouth of the patient, especially in the morning before breakfast." Niemeyer, be it observed, speaks of tongue catarrh as a symptom of oral catarrh; but the fact to which I desire to direct attention is the great frequency with which it occurs alone, or at least without any evident catarrh of adjacent parts. Both among the laity and the profession fœtid breath associated with foul tongue is commonly ascribed to dyspepsia. The common connexion between the two conditions cannot be denied, but it seems to be too often forgotten that the fœtor is not due directly to the presence of noxious material in the stomach, but to decomposing inflammatory products on the back of the tongue. The fur in such cases is known to consist of epithelium and mucus, and often contains bacteria. That fœtid breath is in many instances due to this condition may be proved by a process of exclusion arrived at by a careful local examination of the mouth and nose, and a knowledge of the fact that, except during deglutition and eructation, the œsophagus is firmly closed.

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[1] Klebs, *Handbuch der Patholog. Anatom.*, vol. i. p. 158.

I may be met here with the argument that many cases of this kind can be cured by internal medication; but it must be remembered that this in the present instance is often also local medication, and is also generally accompanied by avoidance of irritating ingesta, a prohibition which acts in favour of both organs (stomach and tongue). This brings us, however, to another point of interest. It is manifest that furred tongue, when due to stomach catarrh, is not always produced by direct extension of inflammation from one part to the other, but in many cases probably owes its origin to a nervous connexion, and is therefore of the nature of a tropho-neurosis.

We do not yet know sufficient concerning vaso-motor connexions to enable us to trace the nervous chain of communication between tongue and stomach, but the anastomosis between the glossopharyngeal and pneumogastric naturally suggests itself to the inquirer.[3] If, however, it be generally admitted that the tongue sympathizes so readily with the stomach, then it almost follows that the converse must be equally true. The conclusions then which one is inclined to draw from these facts are:—

(1.) That fœtid breath, when due to dyspepsia, is caused by the accompanying catarrh of the tongue.

(2.) That local treatment directed to the tongue is the best method of meeting that symptom, and may also influence favourably any coincident gastric disturbance.

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[1] *Krankheiten der Nasenhöhle und des Nasenrachenraumes*, 1876, p. 30.

[2] *Practice of Medicine*, vol. i. p. 417.

[3] See Fairlie Clarke, *Diseases of the Tongue*, p. 10.

Catarrh of the tongue may, however, exist by itself. In such cases over-indulgences in tobacco, alcohol, or highly-spiced foods may be the direct exciting cause.

My attention was first directed to this matter by the following case:—A. W., æt. 40, a robust, powerful man, applied at the ear and throat department of the Royal Infirmary on account of discomfort in his throat, which he himself ascribed to an elongated uvula. He suffered constantly from a bad taste in the mouth, and his breath was offensive, especially in the morning. The only abnormality to be detected on examination was a thickly coated tongue, which was not easily accounted for, as the patient was not given to indulgence in alcohol, nor was he troubled with dyspepsia or constipation. His appetite, moreover, was good, and his conjunctivæ free from yellow tinge, so that I could not avoid looking upon this case as one of uncomplicated catarrh of the tongue. This view was confirmed by the result following the use of local remedies, for the patient returned a fortnight afterwards almost freed from his unpleasant symptoms.

Before proceeding to discuss the subject of treatment, I must refer briefly to the furred tongue of fever, as this condition can in some cases hardly be considered catarrhal or even inflammatory.

During health there is a constant process of desquamation from the surface of the tongue, but the cast-off epithelium is washed away by the secretions of the salivary and other glands, so that, except perhaps at the back of the organ, a clear pink surface is left. Manifestly, then, furring may be caused either (1) by excessive production of epithelium, such as may result from a catarrhal condition; or (2) excessive dryness, which may be due in part to diminished activity of adjacent glands, and in part to rapid evaporation caused by increased body temperature. We can therefore only class as catarrhal those cases of furred tongue in which this is due to over-production of epithelium, and must exclude those in which it is caused by diminished function on the part of the secreting structures within the mouth, or by rapid evaporation, as seen in cases of nasal stenosis.

To the general treatment of these cases I need not allude; but I believe that a considerable amount of benefit may be obtained from the addition of topical applications. In the case which I have briefly described, a solution of nitrate of silver in nitrous ether, which is so valuable in cases of scaly eczema, was the remedy employed, while Michel advises the use of concentrated acetic acid.

I am aware that my remarks on this subject are not supported by a sufficient number of cases to make them conclusive, and that I have had to rely much upon theory; yet I trust that those who have opportunities of observing dyspepsia may be led to test their accuracy.

III.—A SYNOPSIS OF SOME CASES OF CRANIOTOMY TREATED IN THE SIR JAMSETJEE JEJEEBHOY OBSTETRIC INSTITUTION, BOMBAY.

By Surgeon-Major ARNOTT, M.D., Bombay Medical Department.

(*Read before the Edinburgh Obstetrical Society, 12th November 1884.*)

MR PRESIDENT AND GENTLEMEN,—I beg leave to place before you an abridged record of some cases treated in the hospital under my care in Bombay, in the hope that they may be found interesting, as illustrating the sort of work that falls to the lot of an obstetrician in India.

I present to you the cases of craniotomy treated from January 1st 1883 till my departure from India on furlough in July 1883, because during that time I was able, with an approach to regularity, to carry out antiseptic treatment in all operations, and indeed in all cases, and with encouraging success. The results in 1882 were by no means so satisfactory, and it remains to be proved by the results obtained on my return to India whether the improvement is due to careful antisepticism, or was merely accidental. You who are accustomed to a thoroughly well-drilled and intelligent hospital staff can hardly realize how difficult it is to introduce antisepticism and carry it out methodically in an Indian hospital, in which the nurses are women of no experience, and the native servants stupid and apathetic, and without the faintest glimmer of knowledge of the reasons for so much attention to detail. One may draw up the most careful standing orders, but they are useless unless carried out conscientiously by nurses, students, and ward servants, and the thoughtlessness of one person may render fruitless the greatest care of several. For instance, I remember on one occasion when about to leave the operating room, after having taken the greatest pains with a case, being horrified to see the sweeper woman, whose duty it is to look after the W.C., urinal, bed pans, &c., and generally to do all the dirty work of the hospital, and who is also often more or less of a midwife, meddle with the case, and in one second neutralize all the previous antisepticism. But gradually all concerned with the treatment of cases were becoming habituated to the routine and details of antiseptic precautions, which I may say are thoroughly carried out in the surgical hospitals in Bombay.

The hospital building has many defects, which I brought to the notice of Government, and doubtless, when circumstances permit, an hospital fulfilling all modern requirements, and in which work of the best kind will be possible, is sure to be erected. At present work is carried on uncomfortably and under unfavourable conditions. But in every building in Bombay we have this advantage, that the doors and windows can nearly always be left open, and thus we have more favourable conditions than the appearance and architecture of some of our hospitals would encourage us to hope for.

So far as my own experience goes, osteomalacia is, relatively to rickets and also absolutely, more common in India than in Europe. Nearly every year we treat in hospital at least one case of deformity so bad as to require removal of the child by abdominal section, and we have 15 or 20 cases in which craniotomy is required, —a number of severe cases which is, I think, greater than is met with in most lying-in hospitals at home. The number of operations in hospital is annually increasing, which fact, however, means that year by year confidence in European medical skill is spreading, and not that disease is increasing. And here I may be allowed to remark, incidentally, that among other blessings due to British rule in India we may expect that as native quackery is replaced by scientific medicine and surgery, and confidence in the latter is taught by native practitioners, many of whom are men of distinguished attainments, and by educated midwives, the present excessive mortality of native women in the child-bearing period will be diminished.

Of these cases of extreme deformity, some are due to rickets, but a large proportion are the result of osteomalacia, and of these latter a considerable number are Mohammedans. I do not know why there should be so great prevalence of distortion of the pelvis in India, or why in Bombay the Mohammedans should give us more cases than any other caste. But you are aware how different the climate and diet of the people is to what prevails in this country, and you have heard, probably, how different the social life is of the people, regulated as it is so much by caste customs or ordinances. For instance, I may mention the custom of early marriage, and the seclusion in which high caste women, both Mohammedans and Hindus, are kept. As regards the women of the bulk of the population of Bombay, and speaking generally, there is this broad distinction between the Hindus and Hindu outcasts and the Mohammedans, that the former are more employed outside their own homes as labourers, and in various other ways, and thus lead a healthier life. I may also direct attention to the exceeding prevalence of cachexia due to malaria, and low scorbutic condition. A syphilitic taint is also common.

You will observe that in many of the cases there was a very rapid pulse and high temperature. I do not know that these symptoms by themselves are of so serious import in practice in Bombay as they would be at home. The pulse in the native woman seems to be accelerated very readily, and I think that, as I have just mentioned, the almost universal prevalence of more or less of a malarial taint predisposes to feverishness which may pass off in what to a practitioner in Europe would seem a surprising manner. But, on the other hand, vitality is less robust in the Indian woman, and sometimes a fatal result occurs unexpectedly and without evidence of a sufficient cause.

All the cases left hospital before recovery was complete. This is the rule in Indian hospitals. The poor in India have as great an aversion to hospitals as the poor in this country, but in their case it is probably justified by bad conduct of native ward servants, who, though apparently zealous and attentive to duty when the *Sahib* is present, are, I suspect, careless, perhaps even cruel, at other times to those who are unable to propitiate them by gratuities, or unlikely to complain, and especially where the sufferer is of inferior caste. Dislike to be among patients of other castes, and a desire to employ those remedies and follow those customs to which they are used in their own homes, and which are, of course, quite incompatible with hospital discipline, also induce them to leave hospital on the earliest possible day. To these must be added in all serious cases the desire to die at home, and the desire on the part of their relations that at the time of death all caste customs and superstitions should be rigidly carried out.

Most of the cases come to us in an unfavourable condition, having been in labour for one or more days, and subject to the rough manipulations and remedies of uneducated native midwives. These midwives, as a rule, have no knowledge of anatomy or of midwifery as taught in Europe, and when the labour does not progress have recourse to violent attempts to aid labour, or if pains are weak place irritating medicaments in the vagina. Sometimes they even beat the patient to exorcise some evil spirit. Hence not infrequently they tear off limbs, or in breach cases tear the trunk from the head, or injure the maternal soft parts, which we find generally swollen and inflamed. They seldom send a case to hospital till they believe a fatal result to be near, and the people themselves, especially the Mohammedans and others of good caste, do not care to call in the aid of a man till they fear the result. But matters are improving, a few midwives are trained every year in the Grant Medical College, and books have been translated, with the effect of leavening the whole class of midwives with knowledge, and the people are gradually realizing that European skill may often save life.

In practice in Bombay we may, I think, in cases of minor distortion save the life of the child, and in cases of extreme distortion abstain from abdominal section in cases which in Europe would in the one class forbid us to attempt delivery by forceps or turning, or in the other demand Cæsarean section or Porro's operation, because native children in Bombay are considerably smaller than Europeans, the children of the best castes averaging about a pound less than European children, and the children of some other castes being about a pound lighter. The cranial diameters are smaller in nearly the same proportion. But in hospital practice we lose in minor deformity cases the advantage of this, because cases are brought to us in so unfavourable a condition, the child often dead, and the mother in a state of imminent danger, that delivery has to be accomplished as quickly and easily as possible.

The operations were all performed under chloroform. I perforated the head by Simpson's perforator, an instrument which is so efficient and safe that I question if it will ever be entirely superseded.

For traction, or to break and remove the bones of the vault, I used either the craniotomy forceps, the cranioclast, or the guarded crotchet, or in some cases, *where the space available gave facility of use*, the cephalotribe was used. By any of these the difficulty may be overcome in cases where there is only moderate deformity. But in bad cases, under which I would include all with a diameter *under* 2½ in. at the brim, and with deformity also in the cavity and outlet, the operation is difficult and tedious and dangerous, and is at first puzzling to decide as to which instrument to employ, and how to proceed. As far as my experience goes, it leads me to think that after evacuation of the contents of the cranium, the bones of the vault should be crushed, and, if necessary, removed, and traction made by any of the instruments above alluded to, though I prefer the guarded crotchet or the cephalotribe, which I have found less likely to slip than the craniotomy forceps or cranioclast. If the base will not pass, what is to be done? Is it necessary or desirable to adopt the elaborate crushing operations of the base which have been described by various writers, and to provide instruments for which much ingenuity has been expended? I would ask some of those present whose experience has been greater and over a longer period than mine, and who therefore can speak with authority, for an opinion on this point. My own experience is not sufficient to justify a strong opinion, but, so far as it goes, it leads me to this, that the difficulty can in all cases be overcome (as has been pointed out by Barnes and others) by tilting the base of the skull on end, as can readily be done by seizing it by the guarded crotchet, one blade of which is fixed in the posterior nares, and the other applied to the base through the wound caused by the perforator, or the base may be in the same way seized by a crushing instrument. I have in this way succeeded in cases where the conjugate measured less than 2 inches, and I venture to think that a greater success can be obtained by thus, as it were, "dodging" the base past obstacles, than by smashing up the base by the cranioclast or cephalotribe. These instruments are not easily and efficiently used where there is great deformity—the head loose above the brim, and the space to work in so small, that the blades can hardly be properly applied even after several attempts, during which there is very great risk of the soft parts being injured. Some of the disadvantages of the cephalotribe I heard Professor Simpson describe to his class in the introductory lecture this year, and I think he brought them before this Society some four years ago; and as regards the cranioclast, I shall not soon forget an operation I saw at one of the great continental schools, in which, though the anterio-posterior diameter was 2 inches or more, and the operator had fractured the base and removed a portion of it and of the bones of the face by the cranioclast, he was unable to extract by that instrument, and the operation was completed by podalic version.

In my humble opinion it is a mistake to attempt comminution of the *base* of the skull until we have attempted and failed to get it past the obstruction end first, and I believe that the latter procedure is the safest as well as the most efficient.

I have never tried the method of cutting through the skull by an écraseur, but I do not understand how the wire or chain could possibly be applied in cases of extreme deformity, and in other cases it is unnecessary. Nor have I ever tried the basilyst of Professor Simpson, which was not known in Bombay up to my departure for home, but I think that *if the base must be comminuted*, the basilyst is more suitable for the purpose than the cranioclast or cephalotribe.

I have often felt the want of an instrument less ponderous and bulky than the cephalotribe, and at the same time sufficient to seize, and, if necessary, compress the base of the skull, and which would be available for cases of extreme deformity. The basiotribe of Professor Tarnier to some degree supplies this want, but I hope will be improved on. The screw perforator of Tarnier's instrument is, I think, rather too sharp, and not so good as the basilyst of Professor Simpson, and the handles should be large and wooden. I am inclined to think that a combination of the basilyst with powerful fenestrated blades for compression and traction, an instrument which will thus take the best parts of the basiotribe and the basilyst, will in the future be the most useful instrument in our armamentarium *if it is necessary to comminute the base.*

The after-treatment of my cases was simple—antiseptic lotions, either of Condy's fluid or liq. sod. chlor., or carbolic acid; quinine and opium as an antiphlogistic and antipyretic, and often liq. sodæ chlorinæ in half drachm doses as a possible internal antiseptic, and certainly an agreeable drink, which seemed to clean and moisten the mouth and keep the bowels regular. The diet was conjee and milk. Sclerotic acid subcutaneously was often used, but frequently caused painful abscess and feverishness. I shall not use it again.

In some cases there were superficial sloughs of the labia or in vagina, and consequent offensive discharge. This was for the most part the result of the unfavourable condition in which the patients were admitted, the unhealthy condition of the soft parts tending to slough. Once or twice, also, there was slight tear of the vaginal portion of the cervix.

One case (No. 8) proved fatal within twelve hours after operation. She had been admitted in a hopeless condition, but I thought it my duty to operate. Another case (No. 4) was discharged in a somewhat unsatisfactory condition, having renal anasarca, and having had subsequent to operation one or two attacks of malarial fever. The other cases were all discharged in a satisfactory condition. I shall now read to you a summary of some of the cases.

I. *Osteomalacia*—J. A., primipara, æt. 15, Mohammedan. Admitted 7th January 1883 at 4 P.M. Labour pains began three days ago, and continued till 10 A.M. to-day, since when they have all but ceased. She has been for two years suffering from mollities ossium, and was under treatment in the Jamsetjee Jejeebhoy Hospital. Temp. 100°·8, pulse 120. On examination, bladder distended, dirty discharge from vagina. Head impacted in pelvis in first position, ant. post. narrowing to 2¼ inches; os imperfectly dilated, but dilatable. Operation at 5.50 P.M. was somewhat difficult and tedious. The craniotomy forceps and subsequently the cephalotribe used. There was slight post-partum hæmorrhage. Patient very exhausted. Delivery completed at 6.30. The vagina washed out by antiseptic lotion, and quin. and opii. pills and liq. sodæ chlorinat. prescribed.

9th.—Temp. 99°, pulse 128. Lochia offensive; some diarrhœa.

11th.—Temp. 100°·8, pulse 112. Lochia offensive; no pain.

13th.—Temp. 99°·6, pulse 112. Lochia normal.

15th.—Temp. normal, pulse 100.

16th.—Discharged. Prognosis favourable.

II. *Rickets.*—D. T., æt. 21 years, Hindu (Mahratta), admitted 6th February 1883. The patient has an angular curvature of the spine in the dorsal region, caused, she alleges, by a fall down a stair when she was 3 years old. The abdomen has that peculiar prominence observed in all cases in which the head is arrested above the brim. Her general condition is good. Labour began three days ago. On examination the spine and tuberosities of the ischium so approximated as to reduce the transverse diameter of outlet to 1½ inches, and the rami of the pubes in close apposition giving the rostrum shape, and the promontory of the sacrum projecting diminishing the conjugate at the brim. Vertex can be felt above the brim, apparently occupying the third position; membranes unruptured, os and cervix rather rigid (its amount of dilation not noted). I waited for some hours for farther dilation of the cervix, which, however, was still incomplete, when at noon I determined to complete delivery by craniotomy. At noon the head was perforated as usual, and seized by the craniotomy forceps, and afterwards by guarded crotchet, and pulled down (after evacuation of its contents). The skull was then seized and crushed by the cephalotribe and extracted. There was a slight wound of left labium caused by a fragment of bone. The vagina was as usual washed out by a solution of Condy's fluid, and ordered to be afterwards fomented and washed by a weak solution of liq. sodæ chlorinat. The routine treatment of liq. sod. chlorinat. and quinine with opium prescribed. The patient, whose general health seemed good, and who was not feverish, bore the operation well.

8th.—Temp. 100°, pulse 84. No pain; bowels regular; urine and lochia normal.

9th, Morning.—Temp. 99°, pulse 80. Lochia normal; no pain.

Evening.—Temp. 102°·4. To have grs. 10 of quinine to-morrow morning.

10*th*, *Morning.*—Temp. 100°, pulse (in sitting posture) 100. Lochia normal; general condition very good; no pain. Feverishness probably due to irritation of breasts, or to malaria. *Evening.* —Temp. 103°. Continue as ordered yesterday.

11*th.*—Temp. normal, pulse 84. Bowels regular; lochia normal; no abdominal pain or hardness. Wishes to go home. Discharged. Prognosis favourable.

III. *Rickets.*—M. G., æt. 27 (?), primipara, Mohammedan (Hindustani), admitted 11th January 1884 at 2 P.M. This is her first pregnancy, and it is at the 8th month. The patient, a rickety, poverty-stricken creature, was admitted in a most filthy and miserable condition, and very exhausted. Temp. 101°·6, pulse 154. Has had fever and cough for twelve days, and soon after admission had a shivering, and an examination of the chest showed pneumonia of the left lung. On p. v. cord found prolapsed and pulseless; os dilated to about size of an Austrian dollar; membranes ruptured; head presenting in 3rd position, with left arm. The antero-posterior diameter at outlet diminished by excessive curvature of sacrum to 1½ inches. Fœtal heart sounds inaudible. She was given some brandy and nourishment, and when somewhat restored I perforated the head, and rapidly delivered by guarded crotchet. The after treatment was antiseptic lotion and quinine and opium.

14*th.*—Temp. normal, pulse 100. Lochia normal. Cough very troublesome. Transferred to a medical ward, and eventually discharged well.

IV. *Osteomalacia.*—R. M. K., multipara, æt. 35, caste Mohammedan (Bhora), admitted 12th Feb. 1883, 5 P.M. Labour pains commenced at 4 A.M. on 10th, and continued till noon to-day, when they became feeble, speedily ceased, and she was brought to hospital at 5 P.M. Her condition then was as follows:—There is extreme anæmic pallor and general anasarca, urine albuminous, and she is anxious and desponding; temp. normal; pulse 104; fœtal sounds inaudible; labia much swelled by œdema and pale; cord prolapsed, livid, cold, and pulseless; vagina hot and swollen; head felt in first position above brim, and with some caput succedaneum; membranes ruptured, no pains, conjugate of brim diminished to about 1¾ inches, and some lateral contraction. The child being dead and the diameters so small, obviously craniotomy was the proper operation. At 7 P.M. the head was easily perforated, and I seized the head first by the guarded crotchet and then by craniotomy forceps, by which I removed portions of the parietal bones, but could not draw the head past the obstruction. I then tried traction by the blunt hook fixed successively in the orbit and the posterior nares, but failed to move the head. The cephalotribe I could not use efficiently owing to the extreme deformity at the brim, but I got a good hold of the base by the guarded crotchet, one blade of which I passed into the mouth and fixed in the posterior nares, and the other was applied to the base of the skull through this perforation, and with some difficulty and by pulling the face in part I succeeded in completing delivery of the head. There was no difficulty with delivery of the body or placenta.

The operation lasted 1½ hours, and at its close the patient was much exhausted, and the pulse 160. I gave her an injection of ether subcutaneously with much benefit.

13th.—Temp. 98°·4; pulse 128, of good volume; slept pretty well; urine abundant, lochia normal; swelling of labia and of lower extremities diminished; general condition favourable. Prescribed a diuretic mixture and quinine with opium.

14th.—Temp. 103°, pulse 136; urine abundant, lochia normal; slept well; takes food and nourishment well; slight abdominal pain. Prescribed steel with ammon. chlorid. and digitalis, also 20 grs. of quinine.

Vesp.—Temp. 100°, pulse 132; bowels moved by enema.

15th.—Temp. 99°, pulse 120; lochia normal; slept well. Continued mixture and quinine.

17th.—Temp. 100°·8, pulse 108; lochia scanty, but healthy; dropsy diminishing; bowels regular.

On the 18th, and again on the 19th, she had attacks of fever with some looseness, and the lochia were offensive.

20th.—Temp. normal, pulse 102; tongue white and moist; lochia less offensive; no abdominal pain or tenderness.

She now asked permission to go to her own house, and was discharged. Prognosis on the whole favourable. The fever on the 18th and 19th was, I think, malarial.

V. *Osteomalacia.*—S. C., æt. 25, Mohammedan (Deccan), admitted Feb. 23, 1883, at noon. This is her fifth pregnancy, and all previous labours were natural and at full time. Pains began about noon yesterday, and have continued since with the usual intermissions. Fœtal heart sounds inaudible. Temp. 101°·6, pulse 140.

On vaginal examination, ant. post. narrowing to 2½ inches, and also lateral narrowing; membranes ruptured; os dilated; vertex presenting in first position. Fœtal heart sounds heard up to 1.30 P.M. but not after that. Craniotomy was performed in the usual way at 4 P.M., and after the brain had been evacuated, traction was made by the guarded crotchet. Slight laceration of the vaginal portion of the cervix was caused.

Treatment, antiseptic lotions and quinine and opium.

Vesp.—Temp. 102°, pulse 136.

25th.—Temp. 98°, pulse 80; no abdominal pain, but complains of pain in the upper and inner aspect of left thigh.

27th.—Temp. 99°, pulse 80; lochia normal; no pain in leg.

28th.—Temp., pulse, and lochia normal. Discharged.

Name and Caste.	Age.	Term.	Admitted.	Labour began.	Delivery.	Presentation.	Operation.	Pelvis	Remarks.
1. J. A., Mohammedan (Shekh), Osteomalacia.	15	Full.	1883. Jan. 7.	1883. Jan. 4.	1883. Jan. 7. 6.30 P.M.	Vertex, 1st.	Craniotomy.	Conjugate 2¼ inches.	Primipara. Fœtus alive on admission. A puny child-like creature unable to extend thighs. Temp. 100°·8; pulse 120. A dirty offensive discharge from vagina. Discharged Jan. 17. Prognosis good.
2. I. D., Hindu (Mahratta), Rickets.	21	Full.	Feb. 6.	Feb. 3.	Feb. 6. 8 P.M.	Vertex, 3rd.	Craniotomy.	Rostrum shape, transverse of outlet 1½ inches.	Craniotomy on Dec. 8, 1879. Angular curvature of spine, projection of promontory of sacrum diminishing conjugate of brim. Approximation of iliac spine and tubers, diminishing transverse of outlet to 1½ inches. Three days in labour. Os and cervix rather rigid. Discharged Feb. 11, 1883. Prognosis good.
3. N. S., Mohammedan (Hindustani), Rickets.	30	Premature, eighth month.	Feb. 11.	Feb. 10.	Feb. 11. 4.30 P.M.	Vertex, 3rd, left arm funis.	Craniotomy.	Ant. post. outlet 1½ inches.	Primipara. Fœtus dead. Anæmic. Puffy. Pneumonia of left lung for ten days. Thighs flexed and fixed. Temp. 101°·6 F.; pulse 160. After operation transferred to medical ward. Recovered.
4. R. K., Mohammedan (Bhora) Osteomalacia.	35	Full.	Feb. 12.	Feb. 10.	Feb. 12. 9.30 P.M.	Vertex, 1st, funis.	Craniotomy.	Conjugate of brim 1½ inches.	Multipara. Fœtus dead. Urine albuminous. Trunk and lower extremities œdematous. Face puffy and pallid. No fever. Pulse 105. Great difficulty in extracting head. Discharged Feb. 20. Prognosis doubtful or perhaps favourable.
5. L. S. C., Mohammedan, Osteomalacia.	25	Full.	Feb. 23.	Feb. 21.	Feb. 23. 4 P.M.	Vertex, 1st.	Craniotomy.	Conjugate of brim 2½ inches, also lateral contraction.	Multipara, Three days in labour. Fœtus dead. Temp. 101°·6 F.; pulse 140. Cervix rather rigid. Slight laceration of vaginal part of cervix. Discharged Feb. 28. Prognosis good.
6. J. M., Mohammedan (Benares), Shekh.	22	Full.	March 24.	March 22.	March 24. 7.15 P.M.	Vertex, 1st.	Craniotomy.		Primipara. Temp. 99°; pulse 120. In labour two days. Soft parts swollen. Ant. post. and lateral narrowing of brim and outlet. Forceps failed. Discharged April 4.
7. J. G., Hindu (Mochi).	22	Full.	March 31.	March 30. 5 P.M.	March 31. 12.10 P.M.	Vertex.	Version, forceps, craniotomy.		Multipara. In good condition. Version and forceps tried and failed. Some hæmorrhage before delivery of head. Discharged April 11.
8. K. E., Mohammedan (Shekh).	17	Full.	April 11.	April 10.	April 11. 9.15 P.M.	Vertex, 1st.	Craniotomy.		Primipara. In labour 1½ days. Membranes ruptured 24 hours. Fœtus dead. Pulse 150. Extremities cold; face sunken. Os and cervix rigid. Slight pelvic deformity. No difficulty in operating. Never rallied, and died at 7 A.M. on April 12.
9. R. A., Mohammedan.	19	Full.	April 26.	April 26.	April 26.	Vertex, 2nd.	Craniotomy.	Conjugate of brim	Multipara. Craniotomy Feb. 13, 1882, when there

HEAD MEASUREMENT.

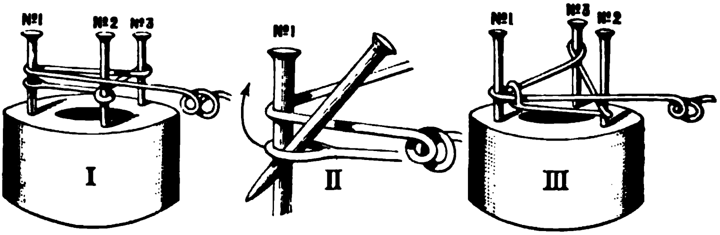
O. M.	O. F.	S. O. B.	B. P.	B. T.	T. B.	M. F.	Fronto-mental.
5	4½	4	4	3½	4	1⅝	
5½	5	4	4	3½	4¼	1½	4
5½	5	4¼	4	3½	4	1⅞	4¼
5¾	4¾	4	3¾	3¼	3½	1⅝	
4¾	4½	3⅞	3½	3	4	1⅝	
5¼	4½	3¾	3½	3¼	3	1¼	

Average sup. maxillo-frontal diameter = 1·58 or 1$\frac{7}{12}$ inches.

IV.—TUBULAR CATGUT DRAINS.

By J. FAIRBAIRN BINNIE, M.A., Aberdeen.

As a satisfactory absorbable drainage tube would be a decided advantage in Antiseptic Surgery, I venture to bring before the profession one made in a very simple manner. The apparatus required to make it is as follows:—A cork with a hole, about half an inch in diameter, bored through its length; five or six pins firmly fixed round the hole in the cork; some carbolized catgut. At the end of the gut a small loop is made and slipped over pin No 1. (in diagram), and then the gut is carried to pin No. 2, and wound with a single turn round it, and so with each till the first pin is again reached. The gut is then drawn across pin No. 1 above the original loop, and, as shown in II., the original loop is, by means of a pin, lifted over both the upper string of gut and the head of the pin. Thus a new loop is formed on pin No. 1, as shown in III. The same process is gone through at all the pins.



After several rounds have been completed, a tube will have been formed which passes readily through the hole in the cork, and thus any length can be made. For an ordinary drainage tube six pins will be found best. The appearance of the tube, when complete, is something like a ribbed stocking or the "Venus' Flower Basket" of naturalists.

The tube may be made of dry chromic gut, and I have reason to believe that this material will prove better than the ordinary carbolized gut. Such tubes as I have described have been repeatedly employed with success in Aberdeen.

Before describing the cases more particularly, I ought perhaps to mention that *after* I had constructed several, and while their efficiency was being tested by Professor Ogston at the Royal Infirmary, my attention was drawn to an article on "Wound Treatment without Spray," by Dr Duncan, in the *Edinburgh Medical Journal*, April 1884, in which he incidentally mentions that his house surgeon had constructed absorbable drains of catgut, but he gave no hint as to how they were made. As Dr Duncan's reference to the subject is slight and general, and as I have never heard of any attempt to make drainage tubes of catgut until those which I myself had made were being tried, I feel justified in calling attention to the matter, and in publishing some of the results obtained.

Cases in which tubular catgut drains have been tried.

I. *Excision of Elbow Joint* (Dr Will's Wards).—During the operation a considerable quantity of chronic pus was removed; but, for fear of injury to the ulnar nerve, resulting from the use of the sharp spoon, a small portion of the pyogenic membrane was left. A few catgut drains were introduced, and the wound dressed in the usual "Lister's dressing." After 48 hours the arm was examined, when it was found that, owing to the remnants of pyogenic membranes, there was free formation of pus. The drains had carried off this pus fairly well, but were mostly absorbed. Ordinary rubber tubes were then introduced, and the case did well.

II. *Amputation of the Leg* (Dr Ogston's Wards).—The stump was dressed with the ordinary Lister's dressing, after four short drains had been introduced. Next day it was found that the tubes had acted efficiently, and were rapidly being absorbed.

III. *Excision of the Elbow Joint* (Dr Ogston's Wards).—Many pouches, full of chronic pus, were found; thoroughly scraped with a sharp spoon and mopped with chloride of zinc. A number of catgut drains were then introduced, and the limb dressed with pads of wood wool impregnated with corrosive sublimate. After five days the dressings were renewed, when it was found that the drains had acted satisfactorily. This was considered a very testing case.

IV. *Excision of a Lipoma on Shoulder* (Dr Ogston's private practice).—The catgut drains in this case were made of very fine gut, and answered their purpose thoroughly.

V. *Amputation of Thigh* (Dr Ogston's Wards).—In this case the drains acted well.

VI. *Excision of Hip Joint* (Dr Ogston's Wards).—In this case also the drains gave complete satisfaction, allowing a large quantity of bloody serum to escape into the loose gauze of the dressing.

Some of the advantages claimed for these tubes are:—*First*, That when introduced to cavities or sinuses, they may be twisted about in any direction, and yet their efficiency is in no way interfered with. *Second*, Owing to the material of which they are composed, they are absorbable in from five to ten days, and thus all the irritation of withdrawal is avoided after their function is fulfilled. In the process of absorption after the first day they collapse, but still drain by capillary attraction. A *third* advantage is the simplicity of their manufacture. They can be made by hospital nurses or patients.

Before closing, I would like to acknowledge the kindness I have received while working at this subject from Professor Ogston and Dr J. C. Ogilvie Will.

V.—CASE OF EMPYÆMA, WITH OPERATION FOR CLOSURE OF PLEURAL CAVITY BY REMOVING PORTIONS OF FOUR RIBS.

By A. G. Miller, M.D., F.R.C.S.E., Surgeon to the Royal Infirmary, and Lecturer on Surgery, Edinburgh.

Report of case on admission kindly furnished by Dr Wyllie.

D. S., æt. 22, single, floorcloth printer, admitted into Ward 31, Royal Infirmary, on 12th April 1883, complaining of shortness of breath, cough, and general weakness.

History.—Had always been a strong healthy man till his present illness, which began, three months before his admission, with severe pain in the left side. Says that the room that he worked in was close, ill-ventilated, and dusty; and thinks his illness was due to cold, caused by a draught in the room. The pain began severely one morning when the patient awoke. He consulted a medical man, who diagnosed pleurisy, and tapped the chest about the end of the first week of the illness. At the operation, 2½ pints of clear fluid were withdrawn, and the patient was much relieved, though he states that much cough, with frothy expectoration, followed the operation. He was tapped a second time six weeks afterwards, but does not know what quantity of fluid was then taken. The pain in the side had disappeared before the first operation, and has not since returned. There was no pain or discomfort after either of the tappings. There has all along been a short dry cough, and the illness has been attended with considerable loss of strength. The family history is good. The father died from accident, the mother from cancer of the mamma. The brothers and sisters are all alive and well.

Present condition.—The patient is well formed; height, 6 feet; weight, 12 stones. Looks pale and delicate, and says he has lost weight considerably during his illness.

There is some fulness of the left side of the chest, which measures at the level of the nipple 18¾ inches, as compared with 18¼ on the right side. On physical examination, it was evident that air was contained in the upper part of the left pleural sac, and fluid in the lower part, the dulness produced by the fluid having its upper limit about the level of the lower angle of the scapula behind, and about the level of the nipple in front. Hippocratic succussion could easily be produced, and the patient was conscious of a splashing in his side when he turned himself in bed. Over the upper or resonant portion of the left side there was some very faint and distant respiratory murmur of a vesicular type, accompanied, both in front and behind, by a few metallic tinklings. The vocal resonance and fremitus were much diminished. Over the lower or dull portion there was complete absence of breath-sounds, as well as of vocal resonance and fremitus. On the right side the percussion note was normal, and the respiratory sounds loud and harsh, but otherwise normal.

The heart was evidently pressed on to some extent, the apparent apex beat being in the epigastrium, and the right border of the cardiac dulness being 2 inches to the right of the sternal margin. The *appetite* was fairly good. The patient *slept* fairly well. The *urine* was normal. The patient's *respiration* as he lay in bed was moderately quiet, the number of respirations per minute varying from 24 to 32. His *pulse* was weak, rapid, and easily compressible, 108 to 134 per minute. His *temperature* presented a considerable amount of diurnal variation, the morning temperature being 98° to 99°, and the evening temperature 100°·5 to 102°.

On the 15th of April, three days after the patient's admission, as the rapidity of the pulse and respiration was increasing, the chest was tapped with an aspirator, and 34 ounces of pus withdrawn. The pus was not fœtid. The patient felt better after the operation, but as the case was thought one that would need to be treated by incision, the patient was, on the 17th April, transferred to the surgical wards, to be placed under the care of Mr Miller.

Surgical History.—Antiseptic opening of the pleural sac was performed in the beginning of May, and a large quantity of pus evacuated. The incision was made below the angle of the scapula in the ninth intercostal space. As drainage was not perfect on account of the rising of the diaphragm, a second opening was made on 20th July, by removing a portion of the ninth rib.

Operation.—Considerable difficulty was found in administering chloroform, as the patient had to be laid on his right side, and partly on his face, to admit of the necessary manipulations, and this materially interfered with the expansion of the right lung, on which he had to depend for respiration. An incision was made at once down to the rib immediately above the previous wound, the rib exposed, the periosteum separated, and about an inch of the rib removed with the bone pliers, after being partially sawn through with a Hey's saw. There was little bleeding, and a knife was then pushed through the posterior layer of periosteum and costal pleura, and a permanent opening established by inserting a large-sized drainage tube. At this operation two drainage tubes were recovered which had previously been sucked into the cavity, notwithstanding ligatures having been attached to them. On examination with the finger, the pericardium and contracted left lung were easily felt, both covered with granulations; the latter apparently firmly tied down to the vertebral column. After this operation patient improved very much for some weeks.

Oct. 5th, 1883.—Examination by Dr Wyllie. Chest, right side, 18¼; left, 16—together, 34¼; left side somewhat shrunken. Anterior wall flattened, and movement very defective on left side. Percussion moderately resonant over whole left side, least so over base near wound. The note is nowhere quite so full as the normal percussion note of the right side. "Bell sound" beautifully present over whole side, except in the scapular region, where thickness of the parieties probably interferes with it. With wound closed there is absolute silence over whole left side on auscultation; but if air is allowed to enter at the wound it produces a sound which, on auscultation of any part of the side, is heard as a loud ringing amphoric breathing. The right side is normal, except that the breathing sounds are puerile.

Dec. 14th, 1883.—Carbolic gauze changed to boracic lint, as former was irritating the skin. From this period, eight months after opening, up till March 1884, no record was made in the case book. By the latter date the use of the spray and carbolic gauze dressing had been discontinued on account of the discharge having become putrid. At this period the dressings were of carbolic or salicylic wool changed almost daily. Sometimes as much as ℥xx. would come away in twenty-four hours. After this the patient began to lose ground progressively and perceptibly.

On *30th May*, 1884, an operation was performed to promote falling in of the chest wall, and, if possible, obliteration of the extensive suppurating cavity. About an inch and a half was removed from four ribs, the 4th, 5th, 6th, and 7th, by a procedure similar to that previously described, only that a chisel was used instead of the Hey's saw. Each portion was removed by a separate incision made over long axes of the rib in the anterior axillary line. This position was made necessary by the impossibility of laying the patient on his right side.

These portions of ribs were shown to this Society on the 2nd July last, when it was reported that their removal was somewhat difficult on account of the ribs being all closely jammed together.

The portions removed were twice their normal thickness from deposit on the inner surface.

After this operation the flattening of the chest wall visibly increased, the lower ribs (8th and 9th) standing out very prominently. There was no space evident where the ribs had been removed.

Report of examination by Dr Wyllie.—*June 18th*; three weeks after operation. Circumference of chest at level of nipples, 33 inches; right side, 18; left side, 15. Much contraction on left side in anterior and lateral regions; very little in posterior region. During ordinary respiration, scarcely any expansion of left side except in lower posterior region. In upper anterior region there is movement of the clavicle during inspiration, but this seems to be altogether dependent upon the expansive movement of the right side, with elevation of the right clavicle and manubrium sterni. Box of larynx depressed very slightly, $\frac{1}{16}$ inch with each inspiration. Alæ nasi do not move at all. Percussion on left side behind markedly dull down to level of inferior angle of scapula, below which it is less dull, there being some boxy resonance in the percussion note. In front, percussion note quite dull above clavicle, and comparatively dull over whole of anterior and lateral regions; least marked between clavicle and upper edge of 3rd rib. *With two coins*, something of metallic clang can be heard in supraspinous region posteriorly; also over base below angle of scapula, but this "bell sound" is inaudible elsewhere in front or behind.

Auscultation. — Some vesicular breath-sound (not much) is audible over scapular and interscapular regions, but not elsewhere. Breath-sounds elsewhere absent.

Accompaniments.—None if wound be kept closed; but if air be allowed to enter at wound, loud metallic tinkling râles are audible, both over apex in front and behind and over base close to wound.

Vocal resonance diminished, except over lung posteriorly. Nowhere any metallic echo.

Right side percussion note fairly good all over.

Auscultation.—Breath-sounds harsh and vesicular, with prolonged expiration over the whole side. Bronchitic accompaniments, especially sibilations present over whole side, but in no great abundance. Vocal resonance very distinct, but not louder than might be expected from emaciated condition of costal parieties.

After this period discharge diminished considerably, and there was promise of the wound closing, and the patient improved in general health and spirits. Injections of various lotions were tried to hasten the closure of the cavity and approximation of its walls. Iodine caused some irritation and increased the discharge. Corrosive sublimate (1 to 2000) seemed to do well, but had to be discontinued on account of its producing diarrhœa. Twice the wound was closed and sealed with collodion after careful washing out, but the discharge was merely dammed back, and had to be let out after a few days on account of the respiration being impeded.

The cavity which before the removal of the ribs contained many ounces of fluid, never could be made to retain more than 3 ounces of injection after the operation.

For a week or two before his death the patient suffered from fits of unconsciousness, which afterwards were accompanied by convulsions, sometimes unilateral and sometimes bi-lateral. In Dr Wyllie's absence he was seen by Dr Muirhead, who pronounced them to be due to uræmia.

Patient gradually sank and died on the 11th September 1884—one year and five months after the commencement of his illness.

Post-mortem examination made on September 13th, 1884, by Dr Alex. Bruce, in the absence of Dr Bramwell.

Chest.—Left side of the thorax below the level of the nipple is much contracted. The right side of the chest, at the level of the base of the xiphisternum and also that at the level of the second rib, measures 16½ inches. The corresponding measurements on the left side are 14 inches and 14½ inches.

On the left side there is a sinus pointing between the 8th and 9th ribs, and another between the 9th and 10th ribs, also four linear cicatrices over the 4th, 5th, 6th, and 7th ribs, 2½ inches long, crossing the anterior axillary line on the left side.

Heart.—Apex found lying between the 3rd and 4th ribs, 5 inches to the left of the middle line.

In the left mammary line the upper border of the diaphragm extends up to the lower border of the 4th rib.

The left pleural cavity contains 7 ounces of cream-coloured, not fœtid, pus. The fluid occupies less than a fourth of the cavity. The right pleural cavity is partly obstructed by adhesions. The left pleural cavity extended from the level of the lower border of the 4th rib upwards to the apex. This cavity communicated by an aperture ¾ of an inch in diameter with a smaller cavity capable of containing 2 or 3 ounces of fluid. This second cavity lay behind the apex of the heart, and communicated with the external openings noted above. The parietal pleura of the upper cavity is much thickened and granulated. The left lung is contracted to a mass slightly larger than a kidney. The right lung was found to be healthy. The liver weighed 8 lb., and was indented by the ribs. It was markedly waxy. The left kidney weighed 10 oz.; the capsule was slightly adherent, congested, fatty, and waxy.

Remarks.—The case was one of *pyo-pneumo-thorax*, following tapping for effusion after pleurisy.

(*a.*) I would remark, in the first place, that aspiration was unequal to the task of permanently removing the pus from the pleural cavity, even though the fluid was apparently aseptic. The only test applied to the pus was the microscope. No bacteria were seen; but the belief that the fluid was aseptic is supported by the fact that when it became distinctly septic nine months after, the patient suffered from septic fever, and then multitudes of bacteria were seen in the discharge.

(*b.*) The stages noted in regard to the falling in of the chest are worthy of close attention. The measurements were, when he came in, 18¼ inches right and 18¾ inches left, the diseased side being the larger. Six months after admission, the measurements were 18¼ inches and 16 inches. This showed that collapse of the chest wall had progressed as far as it could; and this was proved at the second operation by the ribs being found in absolute contact. After this operation and the removal of portions of four ribs, the measurements sunk to 18 inches and 15 inches, showing still greater collapse. But besides the diminution in girth there was marked flattening over the part where the ribs had been operated upon. It will be seen, from the preparation lying on the table, that adhesion has taken place between the contracted lung and the chest wall just where the ribs were removed. And I think it is not too much to suppose that had portions of all the ribs above, and perhaps also of the clavicle been removed, and still more had this been done a year sooner, complete closure of the cavity would have resulted and the patient's life been saved. An earlier operation was prevented by the obstinate refusal of the patient to submit to any interference.

(*c.*) As to the operation, I consider that if performed subperiostially, antiseptically, and by a separate incision for each rib made lengthwise, it should give rise to no danger of life whatever, even though portions of seven or eight ribs were removed and part of the clavicle also. When I operated on Shiels, he suffered very little from shock, though he was very weak at the time. The steps of the operation are simple—1st, an incision in the long axis of the rib for say 3 inches, carried down to the bone at once; 2nd, the periosteum separated carefully; 3rd, the rib is then cut half through with a Hey's saw or a chisel, and its section completed with the bone pliers. There should be no hæmorrhage, for the intercostal artery is safe from injury outside the periosteum. At the attachment of the intercostal muscles, a few touches of the knife may be required.

(*d.*) Now as to the part of rib to be removed, I would recommend the anterior axillary line for the following reasons—1st, That part can be easily got at without having to turn the patient over on the opposite side, which necessarily impedes breathing, and interferes with the safe administration of an anæsthetic; 2nd, The ribs are thinner in front than behind, and more easily cut through; 3rd, The operation can be performed separately from the incision for drainage and dressed separately.

(*e*.) With regard to the question of drainage, I have found that a very dependent opening made at first, as in Shiels's case, is not the best, because after the opening the chest collapses, and the diaphragm rising acts as a valve, preventing free flow from the cavity. The high level to which the diaphragm rose in Shiels's case is worthy of notice, being 2 inches above the normal level. I would imagine, therefore, that an opening between the 7th and 8th, or 8th and 9th, ribs below the angle of the scapula would make the best drain.

(*f*.) In referring to the history of the case I have recorded, I would use it as an argument for early operation. I am as sure as one can be of anything that Shiels's life would have been spared had I operated a year sooner. Because, 1st, He died of amyloid degeneration; 2nd, He greatly improved after the operation, weak as he was; 3rd, The man was in fairly good health when he came into my ward, and would then have stood a much more severe operation than the one I performed a year afterwards; 4th, The parts would probably have contracted more thoroughly at an earlier period; 5th, The operation being aseptic, if performed at first, there would have been less risk at that earlier period; 6th, The lung might have expanded and materially assisted to fill the reduced cavity.

(*g*.) I have but one remark more to make, and it is in regard to the alterations discovered, post-mortem, that had resulted from the operation.—1st, The cavity had become virtually obliterated opposite the part of the chest wall operated on; 2nd, Further obliteration was prevented by the rigidity of the chest wall in the upper part. The ribs being in contact and the lung tied down, it was impossible for that portion to be filled up; 3rd, The small quantity which it was possible to inject after the operation is explained by the existence of the smaller cavity.

I would now conclude this hasty sketch by repeating the main points demonstrated by the case.—1st, The removal of a portion of a rib is a simple and safe operation; 2nd, The removal of portions of several ribs is not dangerous to life; 3rd, The anterior axillary line is the best point for operating, because there the ribs are thinner, and the operation can be performed with the patient on his back; 4th, A separate short incision for each rib is better than one long one in the long axis of the body; 5th, Removal of portions of ribs greatly assists the contraction of an empyæmic cavity, and if a sufficient number are removed from the proper ribs, such a cavity may be permanently closed; 6th, Such an operation should be performed early to give the patient the best chance while the health is fairly good, and there is a possibility of the lung expanding somewhat. I would be inclined to fix the time at that period when it has become evident that a simple drainage opening is not sufficient to effect a cure.

VI.—PRESIDENTIAL ADDRESS AT THE TWENTIETH ANNUAL MEETING OF THE NORTH OF ENGLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

By JAMES MUNRO, M.D. (Edin.), Barnard Castle.

(*Continued from page 524.*)

PHTHISIS PULMONALIS.—This is a generic term, and includes lung diseases arising from different causes, but the ultimate local lung affections are similar in their results. Unfortunately, this decimating disease is still too common, and an opprobrium to our profession and hygiene, although, fortunately, of late years, life is much prolonged in this disease from well-timed and judicious treatment, and some chronic cases keep moderately well even till past middle age or approaching old age; but, on the whole, our improved public hygiene, better domestic sanitary measures, maintaining the general health, and improved medical treatment, have, to a certain extent, prevented the tendency to phthisis, as well as diminished its mortality.

Pure acute tuberculosis, according to my experience, is uniformly fatal in a few weeks or months at the farthest, and my cases have run their course defiant of all forms of treatment.

I have tried the system and plan of treatment in this disease recommended by Dr M'Call Anderson, as he has recorded some instances of success in his book, but some of the cases did not appear to me to be typical ones of true acute tuberculosis, and others seemed to belong to the class of pneumonic phthisis. Quinine in large doses had little or no effect on the temperature, or the sulphocarbolates, or salicylate of soda, or digitalis, etc. From day to day one witnessed rapid wasting and disintegration of lung tissue, and the blood more and more impregnated with effete matter from the tissues, and, therefore, increased fever. We must hope that Koch and his fellow-workers are on the threshold of great and important discoveries concerning the causes of this fatal disease, and we trust that something beneficial may result therefrom, not merely respecting its causation by bacilli or otherwise, but especially with a view to its treatment and prevention. It seems to require further careful experiment, observation, and confirmation of the same by several competent observers, before we can accept the theory that the tubercle bacillus is the absolute excitor of this destructive disease, although it looks probable, and this theory is daily receiving increased confirmation; or does the bacillus appear in the lung and sputum merely as a sequence when the devitalizing and degenerative process is set agoing, when there is, in fact, a suitable nidus and pabulum in depraved blood and textures—an accompaniment—not an excitor or instigator; but this matter is still *sub judicê.*

I do not recollect of having observed any well-authenticated and undoubted cases of the direct contagiousness of phthisis, although in lowered health and in susceptible and predisposed persons, long and frequent exposure to the exhalation and expectoration of affected persons might possibly be highly injurious and an exciting cause.

In this view phthisis might, in some respects, be compared in its course somewhat analogously to intermittent fever, with its occasional and frequent pyrexias, chronic wasting, depraved blood, charged with micro-organisms, etc., and local organic affection.

Judging from my own experience and observation, the predisposing causes of phthisis are as follow:—viz., 1st, and chiefly, heredity. 2nd, The results of catarrhal pneumonia in weak and susceptible people, the morbid products of which are not completely absorbed in the lungs, and thus caseation originates, and consequent necrosis, leading to softening and excavation of lung tissue; occasionally fibroid phthisis from interstitial pneumonia. 3rd, Living in over crowded, damp, and badly ventilated rooms, particularly on the ground floor, and from general insanitary conditions. 4th, Imperfect and insufficient food. 5th, Unhealthy trades and occupations. 6th, Occasionally from severe and repeated attacks of bronchitis and pleurisy, and, perhaps, sometimes, 7th, from the milk and flesh of tubercular animals. I think the predisposing causes take rank according to the order in which I have enumerated them.

Inhalation of antiseptics (according to the doctrine of the day) I have noticed to do good in some cases of profuse expectoration, and also lessen the amount; and in some cases they appeared to diminish, if they did not arrest the morbid process, but maintaining and promoting the general health by all means favourable for that purpose, such as fresh air and exercise; and the tincture of the perchloride of iron, with or without acids, in some bitter infusion, are the means that I have found the most beneficial on the whole medicinally, more so than the hypophosphites, etc.

STRUMA AND PHTHISIS probably belong to the same family, brother and sister, so to speak, distinct, but still connected and intimately associated. Phthisis, according to this view, is not a regular continuity of struma, and those who have several scars on their necks from scrofula, according to my observation, have rarely suffered afterwards from pulmonary tuberculosis, or, perhaps, the *materies morbi* has become eradicated, and when they attain adolescence they live on usually to fair ages by taking care of themselves.

PNEUMONIA.—This is, I believe, less frequent as an idiopathic affection than I formerly thought, although, no doubt, there are cases of primary pneumonia arising from cold or chills combined with other causes, yet I have observed it more frequently as a complication in febrile and inflammatory and other diseases; and there are some good grounds for looking on some cases of croupous pneumonia, at least as an essential fever, and the lung affection merely as a local expression of the general or constitutional disease. Of the three forms of pneumonia, viz. (catarrhal, croupous, and interstitial), I have most frequently observed the first two forms, and I believe that catarrhal pneumonia is probably chiefly caused by cold, or by some irritant in the air, in weak and susceptible persons, and the catarrhal process extending to the alveoli, and so constituting broncho-pneumonia, which requires great care and watchfulness in treatment in weak people, or with a predisposition to phthisis, as if not completely recovered from, or the deposits absorbed, it may be the precursor or excitor by-and-by of phthisis pulmonalis. I have observed, sometimes, a coincidence between herpes of the lips and pneumonia, and when this condition of herpes, more or less extensive, accompanies pneumonia, especially in the young, it is usually grave. My own practice has shown me the proneness to pneumonia from some forms of cardiac disease, and also from morbid states of the blood when surcharged with effete matters arising from defective secretion and excretion from diseases of the kidneys and liver, etc. This disordered state of the blood, from the various causes just named, affects the nerve centres, and when thus associated with severe cold, or a sudden alternation of temperature, etc., produces in some more than a susceptibility to pneumonia, even an exciting cause. Some few cases of pneumonia in unhealthy and unsanitary conditions and surroundings would now, I feel convinced, be traceable to micro-organisms. The confirmed and advanced alcoholics are very liable to pneumonia, and in them it is often accompanied with delirium, becomes soon asthenic, and often assumes a typhoid type, and is frequently fatal.

I have sometimes observed slight jaundice accompany pneumonia, but usually it has been of no moment, and slight congestion may have extended to the bile ducts, or liver; however, as a rule, it passes off soon.

Simple and single lobar pneumonia, without heart or other complication, is usually a tractable and curable disease in sthenic cases, and supporting the heart with digitalis and other means, the exudation soon becomes absorbed, and leaves no trace behind it. I may here remark with regard to the treatment of pneumonia as well as many other diseases, that lately it has been more my practice to treat the patient and not the disease, and observe how the latter is tending to injure, and so endeavour to avert it. We generally treat diseases too much by their names, and the patients too little, but true experience teaches us to attend more to the latter than the former.

CARDIAC DISEASE.—In the early days of my practice I was under the impression that nearly all cardiac diseases arose either directly or indirectly from acute rheumatism and from degeneration of tissue in the aged especially; but that view has been altered by experience, and that the above-named causes only represent a certain proportion of the causes of heart affections. In addition to them I believe that some are caused by hereditary and diathetic states. Some by over-exertion and rupture of some fibres of the chordæ tendineæ and dilatation, some by degeneration of tissue and other concurrent diseases, others by grief, shock, and abnormal stretching of the cusps of the valves, and consequent chronic valvulitis; and a few by long continued and severe functional disorder, ending in confirmed disease. I have found the prognosis in some forms of valvular disease, where there has been compensatory adjustment, fairly hopeful, but on the whole, when this impairment of an organic kind is detectable, the prognosis, in the first instance at least, must be guarded and cautious, for, according to my observation, it is always grave until, after judicious and careful treatment to the organ itself and the stomach and bowels, one finds that the valvular lesion is mitigated. There is one great consolation, that in the majority of cases one can relieve distressing symptoms, and in a few all traces of what cannot but be regarded at first as an organic affection may be removed.

Heart disease, or even disorder, I have found to be a frequent complaint, and some slight forms of endocarditis in some patients in the easy walks of life I have observed to get nearly well under observation, after long rest in bed and nursing, but with the poor this is not easily attainable, if at all.

In relation to this subject, I may mention that I have for several years noticed, in the primary examination of army and militia recruits, that many cases from fatigue, want of food, disappointment, and the abuse of tobacco and alcohol, under these conditions made the heart so disordered as to simulate organic disease, but after a few days' rest and food, etc., it has appeared normal in structure and function. I have found digitalis invaluable, indeed, a sheet anchor and tonic in cardiac disease and failure, for aiding, steadying, and controlling disordered and feeble heart action, and very often requiring to be long continued, and I have not noticed any cumulative or bad effects from it; the more I have used it the more do I trust and rely on it as one of the most valuable medicines in nature, in suitable cases. Aconite is also valuable in some cases of functional disorder.

ANGINA PECTORIS.—This is a neurosis and spasmodic disease, and there are probably three or four varieties of it arising from different causes. During the last few years I have met with several cases, and not all from the same cause, nor exactly the same in appearance of severity or urgency; there are cases apparently without any disease of the heart or vessels (I do not mean spurious angina), less frequently from heart affection, according to my cases, than from disease of the arch of the aorta or large vessels —chiefly atheroma of the arch of the aorta and coronary arteries, etc., and also from fatty degeneration. For prevention I have endeavoured to treat the diathesis, and have not found iodide of potassium or arsenic so important to prevent or diminish even the after neuroses as stated by Balfour and others.

As I have already stated, I have been, on the whole, disappointed with the solution of nitro-glycerine in mitigating or preventing the paroxysms, but, in some forms of it, I have found nitrite of amyl invaluable in promptly subduing the fits of angina, even when inhaled many times in the day, never failing in giving speedy relief.

In one case lately (in a gentleman about 68 years of age), the attacks were very frequent and severe, but they were arrested for a time by an intercurrent attack of gout, only anti-gout treatment continued for some time afterwards did not prevent them recurring; but an attack of right hemiplegia has done so for about 20 months, excepting one attack.

All my cases of true angina pectoris occurred in men, and usually about 60 to 70 years of age, and mostly in those in the easy and better walks of life; and perhaps this disease may be on the increase from the increased hurry in the race of life, etc.

Bright's Diseases.—This class, following organic disease of the lungs and the heart, is the most important class on the list of organic lesions, and is, in its various forms, pretty frequent in my practice, and they have arisen chiefly from inflammation of the kidneys, degeneration of tissue, sequelæ of some organic diseases and some poisoned blood states, alcoholism, and sometimes from climatic causes. With regard to treatment medicinally in the chronic forms, I have found nothing so reliable as the tincture of the perchloride of iron, with or without chlorate of potash, improving the condition of the blood, and acting as a depurant on the system generally and the kidneys locally.

Avoidance of over strong and stimulating diet, and too much meat and alcohol, have also been beneficial in arresting or diminishing the disease, and so has a warm climate like the Mediterranean coast.

I know of one severe case in a young adult having arisen from inflammation of the kidneys, and the albuminuria existing largely for upwards of 4 or 5 years, and some œdema of legs, and the amount was sometimes quite one-third in the test tube, and now for about 2½ years on a pure milk diet there is scarcely a trace of albumen to be detected chemically, and no casts microscopically, and she is gaining flesh, and is fairly well. It is not unfrequent to have considerable temporary albuminuria, arising from epileptic convulsions in the adult, and I have met with a few cases which alarmed me at first, and I looked on the albuminuria as the probable cause, and not the consequence; but, usually, the albumen in the urine from this cause disappears entirely and immediately the effect of the nervous explosion has passed off, and does not reappear till the convulsions repeat themselves. I have seen a few severe cases of albuminous urine, in which it has become quite solid (from heat and nitric acid); but they have not lived long, and usually they have been associated with grave causes.

ZYMOTICS.—I have not much to say about them; of typhus I have seen none here, and I recognise three other forms of fever from my observation, viz., simple pyrexia or febricula, simple continued fever, and typhoid.

Simple continued fever I believe in most cases to be *sui generis*, and a different species from typhoid, and it usually has run a course of about 14 days, and no rash to be observed, no diarrhœa, no tumid abdomen, or other symptoms of typhoid, etc., and usually a quicker convalescence succeeds. I have not seen a case of typhoid in Barnard Castle for several years, but have had cases occasionally at some country houses, most frequently at farm-houses, and the wonder is that they are not even more frequent there, from the general unsanitary conditions usually prevailing, and I can only explain this by the great abundance of oxygen and ozone in the air which must, to a large extent, aid in neutralizing the deleterious elements above alluded to.

RÖTHELN.—It is only within the last few years that I have seen real cases of German measles (Rötheln), and I recognised it at once in adults by the descriptions I read, and also as being something different from anything of the kind I had ever seen, neither measles nor scarlet fever, but something *sui generis* in rash and general appearances, and the glands behind the sterno-mastoid enlarged, and not the submaxillary or parotid. As a rule, I did not find albumen in the urine in this disease, and the throat affection is slighter than in scarlet fever. The fever may be high at first, 104 degrees or so, but soon subsides; it is highly communicable, and I have seen it chiefly in adults.

As I have already suggested, I believe it to be a specific and separate zymotic disease, and that neither attacks of measles nor scarlet fever give immunity from it.

The spread of zymotics is now more frequently prevented than formerly by improved hygiene, and by better isolation and disinfection, and by carrying out the latter more thoroughly for some time; but further exertion in this direction is needed, combined with an educated public opinion concurring.

DIPHTHERIA.—About twenty years ago we had an epidemic of diphtheria in this neighbourhood, and it was very fatal, the worst cases defying all modes of treatment, and there has been scarcely a well-marked case of it in this district coming under my observation since then till last year, when it broke out in several farm-houses, as different foci, having no direct or apparent communication with one another, and separated at some considerable distance from each other, so that there appeared to be some specific exciting cause at each centre, and probably the predisposing ones were long in existence, lowering the general health, and so increasing the susceptibility. Possibly this disease has prevailed in a modified or very slight form at other times and eluded observation; it was most rife in the cold and damp seasons, and, oddly enough, more at farm-houses than in Barnard Castle or the surrounding villages; and this is often the general character of it, and there appeared to be a personal predisposition to it in some individuals and families.

My severe cases were always associated with filth and other marked unsanitary conditions; probably, like typhoid fever, it should be regarded as one of the diseases arising directly or indirectly from decaying vegetable or animal matter, the latter probably being the suitable pabulum for the specific exciting cause.

In some cases the stable was adjoining the kitchen, and no drain from the stable, and the latter upon a higher level than the kitchen, and consequent gravitation and saturation of the kitchen floor with decomposing animal matter, and some of the young patients lived there constantly; and in other cases the conditions were more or less similar—one particularly, where they had had frequent sore throats previously, had large heaps of manure adjoining the walls of the bedroom on the ground floor (and whose walls had always a sort of green mould on them), and saturation of the foundations and walls of this room with liquid and solid excreta; in this house the cases were very severe.

It is still *sub judicê* whether diphtheria originates *de novo* under the above described conditions, but at all events, if not, I may here remark that the specific theory of the origin of diphtheria from micro-organisms is receiving increased confirmation and allegiance. Even then this very bad sanitary state offers a favourable nidus for the growth and development of the specific virus, and if, in the most virulent cases, treatment (both constitutional and local) is not often successful, then the best measures must be prevention and improved hygiene. I believe it to be highly contagious as well as infectious, and, like scarlet fever, it seems to cling with great tenacity to particular houses, localities, and persons, and I have not noticed diphtheria complicating any other disease, but always separate and specific. As far as I have observed and can judge, I believe that ordinary croup, as I have seen it here in children, is not intimately allied to diphtheria, if at all connected with it, and apparently it appears to be more a simple fibrinous exudation on the mucous membrane of the larynx, arising from other causes than the exciting ones of diphtheria. Croup is usually sporadic, and affects children, and it has not appeared contagious.

I must not further trespass on your time, and apologise for having detained you so long with this discursive address; and, gentlemen, I have now finished the task I allotted to myself, to bring into a bird's eye view a general and cursory review of the work of one who has been engaged in the active and practical duties of our profession—love of which holds its members spell-bound, as its various scenes and beauties are unfurled before us. I have chosen to put this aspect before you, for, as you know, some of my predecessors selected a limited and defined subject, and illuminated us by their scientific research and lucid exposition; but I thought it meet that, on an exceptional occasion, I, as one of the general practitioners, might have the privilege of unfolding the practical views we entertain, in the hope that on a future occasion we may extract something further from our scientific and practical friends, seeing that they may know our wants the better; but love to our profession, devotion to our sacred and honourable duties, and God helping us, we are sure to succeed, and be useful to our fellow-men and in our generation.

VII.—STUDY OF A FORM OF ALBUMINURIA.

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(*Continued from page* 540.)

CHAPTER III.

IT now remains to be seen to which of the previously mentioned theories of the pathogeny of albuminuria does this particular form now under consideration belong. And at first sight almost, the one which would ascribe albuminuria to an organic and therefore constant lesion of the kidney must be put aside, as it is not probable that such a condition would give rise to an inconstant and intermittent filtration of albumen. It might be argued that this is not a sufficient reason to exclude it, as in some cases where there has been an undoubted alteration of the renal structure, as, for example, in some cases of undeniable Bright's disease, there are occasional remittences in the presence of albumen in the urine. But in these last, when the intermission occurs, it is very irregular in its appearance, and cannot be traced to any definite cause, except, perhaps, in some cases to an alteration in the general or renal blood-pressure; whereas, in the malady now under consideration, the presence or absence of albuminuria can, in most of the cases, be predicted with precision, and its presence always traced to the recent ingestion of food, and, in some cases, of some particular form of food.

Can the mechanical theory be brought into cause, and the presence of albumen in the urine after food be ascribed to an alteration in the vascularization of the kidneys, either an increased pressure, a diminished pressure, or a slowing of the blood-current. It seems difficult to do so. Perhaps careful sphygmographic tracings of the pulse after meals might in some cases show an alteration in any or all of these factors in different cases, especially if they were taken after full, hearty meals, where not only a large amount of solid, but also of liquid aliments were taken, and especially if the latter were alcoholic in their nature. In that case one would have a full and increased pulse-rate and pressure at first, followed sooner or later by the reverse condition, so that the advocates of either view might advance their own theory as an explanation, and perhaps with a certain amount of plausibility. But then they would both certainly fall to the ground, and fail when they came to explain albuminuria as the result of the ingestion of very small quantities, as, for example, after an ounce or two of bread and an egg, or a little meat, as I have myself seen it to occur. But then it might be urged that though the action of the food could not cause an alteration in the pressure sufficient to account for the albumen, its presence was still due to mechanical causes, viz., to some amount of exercise, or exertion, or the vertical position, it always being absent in the urine first passed after rising from bed in the morning, and appearing later on in the day after the vertical position had been assumed, and a certain, though perhaps small, amount of exercise had taken place. That it was not caused by either of those reasons is proved by the fact that it was in some of the cases absent in the urine passed immediately before going to bed; or, in other words, in urine passed, in some cases probably, and in others certainly, some considerable time after any digestive process, but when the vertical position would have its full effect. Also, in one of the cases which came under my own observation, there was none present on many occasions after prolonged and fast walking. In fact, there was no apparent relation between its appearance and any exercise whatever. Violent, or even moderate exercise having in some published cases been enough to cause albuminuria where none existed under ordinary circumstances, the fact of its not being present after muscular exertion, in these cases at least, is important as limiting the etiology.

The anatomical and mechanical theories being apparently excluded as explanations of albuminuria here, there now rests to consider the "albuminurie hématogène," as M. Stokvis has styled t} it theory which has for explanation the alteration of the crase ofines blood. The above-named writer, after numerous chemical ments, viz., testing a large number of different albuminous urines, and physiological experiments, injecting the albumen excreted by an albuminuric into the veins of a dog, and finding that it did not pass into the urine, whilst the albumen of egg so injected in the same dog did, came to the conclusion that chemically and physiologically there was no difference between the albumen of the blood and that found in the urine of albuminuric patients, and that consequently the cause of the elimination of albumen could not be found in a chemical or physiological alteration of the blood. And, doubtless, if judged simply from the results of M. Stokvis's experiments, such is the legitimate conclusion, and, indeed, the only one to come to. But if, on the other hand, we leave the domain of chemical analysis, since our present knowledge of this subject is not sufficient to enable us to draw, in these matters, definite conclusions, for, as Gamgee says, "Great though the progress of organic chemistry has been, and remarkable the development of our knowledge of the constitution of bodies, we are yet far from being able to unravel the constitution of such complex bodies as the proteids." If, then, we leave aside the question of chemical analysis, we are still forced to conclude from these clinical cases that there is a form of albumen present in the blood at certain times which does differ from that constantly and normally present, at least by its powers of diffusion through animal membranes, if by no other characteristic. And what is found to exist in the cases under consideration clinically has been corroborated by the researches of M. Lépine, and also by those of MM. D'Arcy, Power, and Lauder Brunton.

MM. Mialhe et Pressat, in a *Mémoire sur l'état Physiologique de l'albumine dans l'économie*, tell us that in a normal condition of health, albumen is never found in the excretions, that it is insoluble, and that in order to penetrate into the economy, or to leave it, it must undergo alterations which will render it soluble. Their experiments made them come to the conclusion that normal insoluble albumen was not endosmotic, but that modified by a ferment it became soluble, and was enabled to pass through animal membranes. That in order to become albuminose, the ultimate product of its transformation, the albumen underwent successive modifications, and it is thus that it exists in the economy, viz., under three states, quite distinct the one from the other by their physical and chemical properties, viz.:—

"1. Albumine normale physiologique constituant un des principales éléments du liquide sanguin identique à l'albumine ud blanc d'œuf, insoluble ne traversant pas les membranes, précipitant par la chaleur et acide nitrique sans qu'en excès d'acide puisse dissoudre le précipité.

"2. L'albumine amorph caséiforme résultant de la première modification des aliments albumineux, sous l'influence des sucs gastriques—produit de transition destiné à être converté en albuminose elle est propre à traverser les membranes mais impropre à être assimilée. Elle précipite incomplètement par la chaleur et l'acide nitrique, lequel mis en excès dissous le précipité.

"3. L'albuminose produit ultime de la transformation des aliments albuminoids par l'acte de la digestion, soluble endosmotique, assimilable entraîné par tous les appareils de sécrétoire et de composition organique et se retrouvant dans toutes les humeurs animales le sang, le lait, la salive, l'urine, la sueur, mais en quantité à peine appréciable. Il ne précipite, ni par la chaleur, ni par acide nitrique, et seulement par les réactifs qui décèlent toutes les matières animales. Ces trois états de l'albumine constituent une seule et même substance, qui en se modifiant acquiert des propriétés nouvelles ; ils sont chimiquement isomériques, et l'analyse la plus scrupuleuse ne peut constater la moindre différence dans leur composition élémentaire."

These conclusions of M. Mialhe are exceedingly interesting, as pointing to the fact that the albumens ingested undergo various changes in the economy before being utilized, and so exist at different times in different forms. But from what he admits our present knowledge of their differences to be, he seems to draw too definite opinions as to the forms and their distinguishing characteristics. For, as he himself says, these three states of albumen constitute one and the same substance, they are chemically isomeric, and the minutest analyses cannot distinguish them. Some of his conclusions are faulty, as, for example, when he says that the albumine in Bright's disease distinguished itself from that of the normal blood by dissolving in an excess of nitric acid, this being a character on the contrary which assimilates them ; also in saying that the normal physiologic albumen was the same as white of egg albumen. In researches instituted by M. Becquerel and M. Vernois they came to conclusions entirely opposed to those of M. Mialhe.

" L'albumine du sang des individus sains ou atteints des maladies les plus diverses mais sans albuminurie précipite complètement par la chaleur et par l'acide nitrique.

"2. L'albumen du sang de tous les albuminuriques sans aucune exception jouit de propriétés absolument semblables.

"3. Albumen de toutes les urines albumineuses se coagulent parfaitement par la chaleur et l'acide azotique."

" L'albumine dans le sang normal, dans le sang des albuminuriques, et dans les urines albumineuses elles-mêmes, est absolument semblable sous tous les rapports."

That this last statement of M. Beçquerel is too exclusive we shall see from the researches of others, unless he merely intends it to apply to the results of chemical analysis, for " sous tous les rapports " would include all and every mode of investigation, and it has been proved that sous le rapport of diffusion, the albumines differ at different times even in the same patient.

The following is an analysis of fibrine and of its peptone (*Revue Mensuelle* 1877, Brücke et Voit).

100 grs. de substance Leche.	C.	H.	Az.
De Fibrine, ...	52·5	6·98	17·34
De peptone de Fibrine,	52·4	6·95	17·13

Despite this small apparent difference in their chemical composition, these two substances act quite differently under the action of heat and nitric acid, one coagulating and the other (peptone) not doing so, this being, according to M. Adamkiewicz, the distinguishing characteristic of peptones. The same author stating that they differ simply from albumen by their molecular arrangement.

According to M. Henniger the peptones are the hydrates of the albuminoids, and they differ from the albumens by their rotatory power as also they do amongst themselves.

MM. Brücke and Voit have doubted whether albumen was really absorbed by the intestines as peptones. Brücke, on killing animals during digestion, found that the chylifères held coagulable albumen. This fact led him to suppose that the peptones might be merely an accessory product of digestion.

M. Diakonow expressed the opinion that peptones were not absorbed as such, as one did not find them in any of the interstitial juices. But M. Drosdorff, in the laboratory of M. Hoppe Seyler, proved the presence of peptones in the blood of the portal vein, and he found that the more quickly he examined the blood after its extraction the greater was the amount he found, thus proving that the peptones undergo a transformation in the blood, and explaining at the same time why M. Drosdorff did not find them in the lymph. Kühne has found that the pancreatic juice before converting coagulated bodies into peptones seems to change them into something resembling their raw condition. In Claud Bernard's case the cooked eggs which he ate seem to have undergone this change, and then been absorbed in the same way raw eggs would have been.

M. Gubler, in 1850, first noticed the difference in the proportion of albumen contained in the urine of digestion as compared with that of the blood. His attention having been drawn to the point clinically, he corroborated it by experimentation. He made some of his albuminuric patients undergo an alimentation containing various amounts of azotized principles, and then noticing the effect upon the amount of albumen contained in the urine of digestion, and in that of the fasting urine. M. Gubler found that apart from the albuminuries due to a renal congestion (fluxion rénale), and transitory albuminuria associated with phlegmasies, that all obeyed more or less the following rule, viz., that the urine of digestion contained more albumen than the urine of fasting. There being sometimes three times as much albumen in the former as in the latter—et il arrive quelquefois que l'urine la plus abondante est en même temps la plus chargée. The following table gives the results of six of his analyses:—

	Urines de la Digestion.		Urines du Jeûne.		Proportion pour 1000 G. R.	
	Poids de l'urine.	Poids de l'albumine.	Poids de l'urine.	Poids de l'albumine.	Urines du jour	Urines de la nuit.
	Grams.	Grams.	Grams.	Grams.	Grams.	Grams.
1er Cas.	341	4·	370	3·4	12·	9·2
2 „	470	3·20	990	3·	6·80	3·01
3 „	462	5·30	397·50	3·60	11·47	9·
4 „	1668	2·38	2022	2·02	1·42	0·99
5 „	740	9·	1500	4·	12·1	2·06
6 „	870	0·478	674	0·037	0·55	0·05

Most of the above cases were suffering from Bright's disease. No. 6 was a case of phthisis complicated with albuminuria.

(*To be continued.*)

VIII.—REPORT OF THE ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL, FOR THE QUARTER ENDING 30TH APRIL 1884.

By ANGUS MACDONALD, M.D., Physician to the Hospital.

(*Read before the Edinburgh Obstetrical Society*, 16*th July* 1884.)

IT is again my pleasing duty to be able to record another trimestre without a single death occurring among the intern patients.

As this is now the third three months in succession of my service in which I have been able to report a clean bill of health among the intern patients, it may, I think, be held proved that the sanitary condition of our new Hospital, about which some of the Fellows a few years ago seemed rather suspicious, is quite satisfactory.

This year we had one death recorded, in a case of premature delivery in an out-door patient, which was attended by one of the pupils. But this makes up our entire mortality. We have therefore to record 172 intern cases without a death, and 406 extern cases with only one death. Putting these numbers together we have the gratifying result of 578 cases attended in connexion with the Maternity with only one death. Of course it is to be allowed that our statistics of the extern cases is not so perfect as that of the intern cases, which are closely under our own eye. But allowing for any mistake of that sort, our results compare well with the best statistics of public or private practice.

It will be noticed in the sequel that this year we had to deal with several cases of high contraction of the pelvic brim leading to dystocia and necessitating operative interference, so that if there had been anything unhealthy in the house it was certain to have shown itself. I am not referring to these statistics in any spirit of boasting, but of thankfulness, and merely allude to the facts as a small contribution to the establishment of the theme that midwifery hospitals, with due care as to antiseptics, cleanliness, and ventilation, may be made as healthy as the best private practice; and to help to stem that tide of rash opinion, so rife some years ago, which, arguing from the abuse, condemned inconsiderately the use of those very valuable institutions.

With these preliminary remarks, I proceed to report the work of the three months. And, firstly, we consider—

The Intern Cases.

The total of these was 65 cases, divided into 43 primiparæ and 22 multiparæ.

Of the multiparæ, 12 were delivered for the second time, 2 for the third time, 4 for the fourth time, 2 for the fifth time, 1 for the ninth time, and 1 for the tenth time.

The average age of the primiparæ was 21·3 years: the youngest 16, the oldest 34. The average age of the multiparæ was 27 years: the youngest 19, the oldest 38.

Classification of Labours.—The labour was natural in 49 cases; laborious in 5 cases; preternatural in 2 cases; complex in 4 cases; premature in 5 cases.

The average duration of labour in the primiparæ was—for first stage, 16 hours 10 minutes; second stage, 2 hours 54 minutes; third stage (1), when not expelled, 50 minutes, but (2), when expelled by the Credé method, 24½ minutes.

The average duration of labour in the multiparæ was—for first stage, 9 hours 9 minutes; second stage, 1 hour 8 minutes; third stage (not interfered with), 58 minutes, expelled by Credé's method, 14 minutes.

In the 60 labours which occurred at or near full term the presentations of the fœtuses were as follows:—The vertex presented in 58 cases, the position being L.O.A. in 45 cases, R.O.A. in 5 cases, R.O.P. in 6 cases, L.O.P. in 2 cases; the breech in 2 cases, the position being R.S.P. in 1 case, and L.S.P. in 1 case.

Sex of children was—male in 36 cases; female in 27 cases; doubtful in 2 premature cases.

Mortality—(1.) Maternal, none. (2.) Fœtal: 5 premature fœtuses not viable, 2 still-born. (3.) Infantile: 1 died of jaundice, and 2 were overlain.

Condition of Perineum.—In primiparæ the perineum was torn in 28 cases, in 25 partially so, and in 3 completely up to the sphincter ani. In multiparæ the perineum was torn completely in 1 case only. One or more stitches were introduced in 11 cases, in all of which, with one exception, the perineum had healed before dismissal.

Maternal Complications during Puerperium.—1 case mammary abscess. Forceps were used 7 times to complete delivery—4 high operations, and 3 low operations. Version was performed once.

Extern Cases.

The number of cases reported amounted to 140—28 primiparæ and 112 multiparæ.

Of the 140 labours, 6 were cases of premature labour occurring at some period between the third and sixth month, 124 were natural labours, 4 were preternatural, and 6 laborious and complex.

In the 134 cases which occurred at or near full term the presentations were as follows:—Vertex L.O.A. 123, R.O.A. 3, R.O.P. 2, L.O.P. 1; breech L.S.A. 1; brow 1; and in 3 cases in which twins were born the presentation of the first child in all 3 cases was vertex L.O.A.; of the second child in one case it was vertex L.O.A.; in another, vertex R.O.P.; and in the third case, breech R.S.P.

One woman, after she had given birth to twins, was attacked with severe convulsions, but she recovered under treatment in two days. One maternal death occurred in a case of premature delivery. Forceps were required to complete delivery five times, and version had to be performed once. In all these cases the children were born alive and the mothers recovered perfectly.

It is, of course, to be borne in mind that, as the great bulk of the extern cases are little under control of the Hospital officials, our records of them are not so trustworthy or exact as of those patients which come under care in the Hospital.

It will thus be seen that during the quarter the cases attended in connexion with the institution was 205, which is fully up to the average.

In each case the eyes of the fœtus after birth were treated with a half per cent. nitrate of silver lotion. Subsequently a one per cent. lotion of carbolic acid was employed daily for several days. There was no ophthalmia proper. We had 4 slight cases of conjunctivitis, which we traced to the nurse's using too strong a solution of carbolic acid. But on rectifying this mistake all of them got well rapidly, and we had no recurrence.

During the previous three months bichloride of mercury was freely used as a vaginal wash in the Hospital, but having regard to the evil results reported in some continental maternities from the use of the perchloride, I discontinued it during my quarter, and returned to the carbolic acid lotion. It is manifest from the results that the patients did not suffer therefrom, and they were relieved from any risk, however small, of mercurial poisoning.

In 41 consecutive cases the hearts of the patients were carefully examined before or during the puerperium. In 29 out of the 41 cases, cardiac bruits were audible either in the auricular or mitral areas, or both. In most cases these were present before delivery, and continued audible, though getting fainter during the time of residence in the Hospital. There was no evidence to show that any of these 29 patients suffered from organic disease of the heart.

I now proceed to report upon the more important cases.

I. *Dystocia due to Flat Pelvis—Delivery by Version.*

Mrs H., æt. 34, iii-para, was delivered in the Maternity Hospital six years previously by forceps. In 1882 she was again delivered of a premature still-born child. She was admitted into the Maternity Hospital on 31st March 1884, having menstruated for the last time on 30th June 1883. Examination of the pelvis gave an external conjugate of 7 inches and an oblique of barely 4¼. From this it was inferred that the true conjugate must be about 3½. As the type was clearly flat, it was determined to effect delivery by version. Accordingly, when the woman fell in labour on 30th March, after allowing the first stage to continue for nine hours, when the cervix was completely dilated and no advance of the head made, I proceeded to operate. The head presented in the transverse diameter, occiput to the left, the anterior parietal presenting. The patient was chloroformed, and the right hand introduced into the uterus. I had no difficulty in seizing and securing the right foot, which was brought into the vagina. The waters had not burst until the hand was passed through the os. But it was now found specially difficult to effect version of the child's body, partly because the head had partially engaged in the brim, and partly because every effort at manipulation increased the uterine tension, although the patient was deeply narcotized. It was only after passing a loop of broad tape over the ankle of the right foot, and making downward traction with the one hand upon the tape, whilst I pushed up the presenting part with the other hand, that I finally effected version. The arms were disengaged without difficulty. Difficulty was again experienced in getting the head through the brim. It presented with the occiput towards the right side of the pelvis, forehead towards the left. By maintaining good flexion of the hand on the chest, and by the aid of powerful pressure from the abdomen, the head passed the brim, after which the occiput rotated forwards, and the head was born in the usual way. There was deep depression in the region of the left coronal suture, indicating the situation of the sacral promontory as the head was rounding it. Both mother and child ultimately did well, though some little trouble was experienced in resuscitating the latter immediately after delivery.

This case brings before us the comparative advantages of long forceps and turning in cases of contracted pelvis. I am in the habit of teaching that we ought to use long forceps always in cases of pelvic deformity when the connexion is uniform, and to prefer turning to forceps in most cases of flat pelvis, unless the head has already engaged in the brim by a considerable portion of its circumference before you are called to operate, in which case forceps are to be preferred. But experience of such difficulties since the introduction of the axis-traction forceps is continually impressing upon me the propriety of still further limiting the application of version in cases of flat pelvis. That version is best in those cases of flat pelvis in which there is presentation of the posterior parietal, or of the face, goes without saying when we consider the difficulty of applying instruments under these conditions. But I believe that with our improved instruments it will be ultimately found both easier to accomplish and safer for mother and child to employ forceps in all cases of flat pelvis, where the size permits of our expecting success, *i.e.*, unless the conjugate be under 3¼ inches, than to have recourse to version. At any rate, I have no belief whatever in the doctrine sometimes taught that you can bring a living child through a smaller pelvis by version than by forceps, and my belief is not theoretical, but is founded on considerable experience of both operations. But if we are to succeed by version, quite as much of the success depends on the assistant who presses down the head as upon the operator who exerts traction and guides the head. It is easy to spoil a child's chances of life by too much traction on the spine without producing any visible injury.

II. *Dystocia due to generally Small Pelvis—Delivery by Axis-Traction Forceps.*

M. S., aged 16, primipara, was admitted into the Maternity Hospital on 2nd April 1884, labouring pains having commenced.

Measurements of the pelvis gave—distance between iliac crests, 9½ in.; between iliac spines, 8½ in.; an external conjugate of 6½ in.; and a diagonal conjugate of 4½ in., from which data we inferred that we had to deal with a uniformly contracted small pelvis, whose true conjugate was under 4 in. The first stage continued 24 hours, but the pains were not strong.

The membranes ruptured before the cervix was fully dilated, and the pains continued after rupture for eight hours with considerable force, though the head made little or no progress. The fœtal heart's action meanwhile was good, and there was no great pressure upon the parts. The head presented the vertex occiput to the left and forwards. I was now summoned, and applied Simpson's axis-traction forceps, which held well, and after considerable traction efforts I was able to complete delivery. The head was only slightly engaged in the brim when the forceps were applied. Before delivery the head formed a large caput succedaneum. In its place a cephalhæmatoma afterwards formed. The perineum was slightly notched; but the vagina was cut on both sides behind the ostium by the pressure of the blades.

Both mother and child did well. The patient was dismissed on the 25th of April, the uterus being well involuted and the parametria clean.

III. *Dystocia from uniformly Contracted Pelvis—Delivery by Forceps.*

M. M., 36 years of age, iii-para, was admitted into the Maternity on 23rd February 1883.

Her previous confinements were prolonged, but terminated naturally. On the first occasion the child was living; on the second, dead. She had also had one miscarriage about 13 months before admission, her pregnancy having advanced 3½ months. Measurement of her pelvis was made, with the following results: —distance between the iliac crests, 8¾ in.; between iliac spines, 7¾ in.; external conjugate, 6¼ in.; oblique conjugate, 4¼ in.; true conjugate, 3½ in.

The labour commenced at 5 A.M. on 29th February. The head presented transversely, the occiput being towards the left, and the posterior parietal presenting, so that the saggittal suture ran near the symphysis pubis.

As the pains, which were moderate in amount, persisted, the position of the head was spontaneously rectified, and the head engaged in the pelvis tolerably symmetrically, flexion of the chin on sternum taking place. The first stage lasted 11 hours. At 5 P.M., after the water had been an hour burst and the cervix was completely dilated, I applied Professor Simpson's axis-traction forceps to the head, and after pulling for some time, had the misfortune to find that one of the blades suddenly slipped. This arose from the second catch having got out while I was pulling. In slipping, the forceps caught a portion of the cervix on the left side and tore it. This hung down after delivery as a tag, and was clipped off. I now applied Sir James Simpson's long forceps, and completed delivery with them. The child did well, and so did the mother. The injury to the cervix was found to be unimportant. Examination immediately after delivery confirmed entirely the calculated length of the conjugate.

The patient went out well on 12th March. This case shows the advantage of the forceps in cases of uniformly contracted pelvis. It also points to a weakness in the construction of Professor Simpson's axis-traction forceps. The catch by which he secures the connexion between the traction-rod of the second blade with the first is liable, if not constantly watched, to slip. It is, moreover, liable to break at this part, as occurred to me when using the forceps on the dummy pelvis. I am satisfied, however, that the head yielded when under the grasp of the axis-traction instrument, as it came readily when the ordinary long forceps was applied. This I do not believe it would have done had I first put on the ordinary pair.

It may be asked, how did the patient get over her previous two confinements without artificial aid, seeing that the pelvis was proved by accurate measurement to be not more than 3¼ in. in the conjugate, whilst the transverse diameters were narrow also. The answer to that seems to be contained in the fact that in the present instance the fœtus was large. It weighed 8¼ lbs. It is possible that in the former labours the fœtuses were smaller, as it is a well-known fact that average weight of children increase with the number of the pregnancy. It must at the same time be borne in mind that the previous two labours had been much prolonged, and that the child's life was sacrificed in the first labour.

IV.—*Dystocia caused by uniformly Contracted Pelvis—Delivery by Axis-Traction Forceps.*

H. C., aged 34, ii-para, admitted 10th April 1884. Her first labour was very prolonged, but ultimately terminated naturally; child alive. The abdomen was very prominent. Measurements of the pelvis gave—distance between the iliac crests, 9½ in.; spines, 9 in.; external conjugate, 6½ in.; diagonal conjugate, about 4¼ in. True conjugate, from measurement taken after delivery of the child, was found to be 3¼-3 inches.

The patient fell in labour at 9 P.M. on 9th April before admission. The head presented at the meatus in the left occipito-anterior position. The pains were feeble and the first stage slow. The waters escaped early. When the cervix was fully dilated, or nearly so, the head was found to present still at the brim and to refuse to engage in the pelvis. The head was strongly flexed, and the posterior fontanelle, which could be felt, was to the left and slightly anterior.

As the labour had now continued 37 hours I resolved to deliver. The patient was accordingly put under the influence of chloroform, and I introduced, with a little difficulty, my own modification of the Tarnier-Simpson axis-traction forceps. After the rods had been adjusted to the handle, traction was made, and in a short time the head came through the brim and pelvis. The forceps were removed when the head was at the vulva, and the remainder of the delivery completed in the usual manner. The child, which was born asphyxiated, revived after application of artificial respiration. By careful exploration of the pelvis by the hand it was ascertained that the conjugate was barely over 3 inches. The child, which was a female, weighed 8 pounds. Both mother and child did well. The cervix was found to have yielded rather deeply on the left side.

V.—*Dystocia from Contracted Flat Pelvis—Delivery with Axis-Traction Forceps.*

H. J. D., aged 24, i-para, was admitted into the Maternity on 11th April 1884. The examination of her pelvis gave the following results:—Distance between iliac crests, 10 in.; distance between iliac spines, 9 in.; external conjugate, 6¾ in.; diagonal conjugate, 4½ in.; true conjugate inferred to be 3¾ in. The labour began at 10 A.M. on 12th April. The vertex presented in the left occipito-anterior position. The pains were slow, and the waters did not escape till midnight. The head by this time was distinctly engaged in the brim, and the external os the size of a florin. By 2 A.M. the head had further engaged in the brim, the head occupying a transverse position in the pelvis, with both fontanelles on the same level. Caput succedaneum large. Os uteri the size of half-a-crown. At 6 o'clock the outer os was nearly completely dilated; caput succedaneum very large. Head still in the transverse diameter and unflexed, but firmly jammed into the pelvis. At 9 P.M. I arrived, and finding no advance taking place I applied my own variety of the Tarnier-Simpson axis-traction forceps. The introduction and locking succeeded with little difficulty, and on traction being employed with the pains they held well, and the head was slowly pulled down. In sinking into the pelvis the head rotated so as to bring the occiput forwards. When the head reached the outlet the blades were cautiously taken off. During the next pain, with the aid of pressure upon the fundus uteri, the head was born, and in a few seconds delivery was completed. There was no perinæal tear. The child was asphyxiated when born, but after the employment of means for its resuscitation it breathed well. The patient made a good recovery. Four days after delivery the child was overlain by its mother and died.

These cases are specially interesting to me as being the first in which I had the opportunity to try my own modification of the axis-traction forceps. My previous experience with Professor Simpson's variety of the instrument led me to the conclusion that it could be improved upon. Some of these defects have been already rectified by the inventor, such as shortening of the cross-bar.

In spite of specious reason to the contrary, I feel convinced that for the ordinary run of forceps cases axis-traction forceps are not required. To use them for this purpose is similar to the proposal to employ a steam-engine to crack a nut. Now, though this be a possible, it is not an economical application of force. I have always felt and constantly feel more and more convinced, that if we are to enjoy in practice the real advantage in difficult cases presented by the axis-traction instrument, we must be able to produce an instrument that can be employed at will, either as ordinary long forceps for ordinary cases, or as an axis-traction forceps in difficult cases. This I have attempted to accomplish, by making the traction rods freely movable at will. Experience has taught me that the instrument can be easily and successfully worked.

My instrument, without the traction rods, differs hardly at all from an ordinary Simpson's long forceps. But if the case is proved to be difficult axis-traction rods can be introduced with it, or if it is found that the head does not move in the grasp of the ordinary forceps the rods can be readily introduced while the head is in the grasp of the forceps.

My objections to Professor Simpson's instrument are —1st, That the rods, like Tarnier's, are fixed, and by their length are decidedly in the way in locking, however expert the practitioner may be; 2nd, That the pin by which the rods are fixed to the catch at their distal extremities is liable to break; 3rd, That the catch attaching the second rod is liable to slip off while in use; 4th, That the instrument cannot be used without the traction rods. All these objections I hold are inapplicable to my instrument. The traction rods fall back and are out of the way completely when locking. The blade, with the rod attached, is as easily introduced as a simple blade, and by adopting the powerful bolt of Tarnier's original instrument, it is rendered impossible that either of the traction rods could give way or get loose.

No more difficult case could have been found to test the value of the axis-traction instrument than the former of the two cases reported. It is the kind of case that, before the introduction of this instrument, would certainly have led to craniotomy. Indeed, until I had carefully measured the pelvis after delivery, I did not consider that the contraction was so high. I lately had another opportunity of applying the same forceps in a similar amount of contraction, with a correspondingly favourable result.

Part Second.

REVIEWS.

Die Epidemische Verbreitung des Scharlachfiebers in Norwegen. Von Dr Axel Johannessen, Kristiania.

The Epidemic Spreading of Scarlatina in Norway. By Dr Axel Johannessen, Christiania. Pp. 214. Dybad.

This treatise is one of the prize essays to which the Crown Prince's gold medal was awarded by the University of Christiania, and is certainly a most elaborate and laborious disquisition on the phenomena of the malady in question in the extreme north of

Europe, particularly during the interval between the years 1825—78: the limited extent of the population, and the systematic registration in Norway being especially favourable to this investigation. In the preliminary historic notices, the author claims for Daniel Sennertus, Wittenberg and his son-in-law Döring in Breslau (1627), the honour of making the first clear and indubitable relation of scarlatina, while he admits that Sydenham and Morton (1661-1675) made the full knowledge of it the common property of the medical profession. A large chapter is occupied with a survey of the progress of the epidemic in the various towns and parishes (stadten und stiften) of the land in connexion with maps appended, wherein the intensity of the disease is denoted by more or less red colourings, and the year 1876 is mentioned as exceeding in mortality that of any year since 1742 and 1773.

A series of tables are given, wherein one may ascertain the number of cases in the whole kingdom, and in each particular district up to 1878, as medically reported to the authorities, together with the proportion of sick to the 1000 inhabitants. Considerations on the specialties of the various epidemics lead to the conclusion that 13 epidemics, or 28 per cent., occurred during the winter quarter; 9, or 19·3 per cent., in spring; 8, or 15·4 per cent., in summer; and 22, or 42·3 per cent., in harvest. This accords with Sydenham's observation in England. The rarity of cases under one year, and the great prevalence at four years, are expressed in the following row of figures, noting the liability of the various ages—4, 3, 2, 1, 5, 6, 7, 8, 9, 10, 11, 12; and under one year it appears to attack both sexes with great impartiality. In the twelve years, from 1867 to 1878, there sickened from it—males, 30,425 = 49·2 per cent; females, 31,427 = 50·8 per cent.

The census of 1875 gave 888,571 males, and 930,282 females in the entire kingdom, so that there resulted 2·85 per 1000 males, and 2·82 per 1000 females who suffered from scarlatina.

Collett in *Nyt Magazin for Natur Videnskaberne*, entitled "Bemærkninger til Norges Pattedynr Fauna," has called attention to the curious coincidence of an enormous increase of *lemmings* in the years wherein scarlatina most abounded. The increase was accompanied by a corresponding augmentation of the weasels, foxes, and wolves, who preyed on them.

The mortality of scarlet fever is stated to be from 2·12 per cent. to 12·5, differing from 3 to 30: it seemed to depend greatly on the hygienic influences acting on the dwellings, being most fatal in low, damp, and crowded habitations, sparing the well-to-do; exceptionally at Stavenger in 1841 it attacked most widely and deadly the richer families.

The peculiarities of the contagium, and its importation through divers orders and sorts of sick people, are fully discussed in a very interesting style, as also the influences of meetings, burials, weddings, and auctions, etc., in spreading it; while numerous cases of healthy individuals transporting it in their persons or clothing, and themselves unharmed, are also cited. England is credited with having included scarlatina repeatedly among her exports to Norway. Thomas is quoted as having been able to collect only 200 cases in the whole series of medical literature, wherein an individual has had repeated attacks of scarlatina,—a proportion which is surely understated; in our own experience we could call to mind a goodly number of such—two of them in one home circle. The sequelæ and complications, kidneys, throat, and brain affections, are treated in a solid and satisfactory manner. Altogether the book is a model of painstaking, honest work, comprehensive and exhaustive, and gives a high idea of the capacity and diligence of the author.

Spinal Deformity in Relation to Obstetrics. A. H. FREELAND BARBOUR, M.A., B.Sc., M.D., F.R.C.P.E. W. & A. K. Johnston, Edinburgh and London.

THE folio before us, containing as it does 34 large plates and an equal number of pages of letterpress, was presented in 1883 to the University of Edinburgh as a thesis for graduation in medicine; and to its writer was awarded, and most justly so, a gold medal; for the work is no mere compilation or *réchaufé* of other men's labours, but is the outcome of honest and original investigations, in which the lines followed by previous writers on the subject under consideration have been applied to material which was lying unused, and probably unheeded, in the medical museums of Edinburgh. Ten such specimens Dr Barbour has carefully examined and carefully measured, and faithful reproductions of photographs, taken to scale, are given in the plates. In an appendix two plates of frozen sections, made of a cadaver, in which there was spinal caries, are given, along with a description, which forms a valuable addition to the literature of topographical anatomy.

Dr Barbour has had the good fortune of becoming the possessor of a cadaver, where there was kyphosis in the dorso-lumbar region due to caries, and where the condition of the pelvic organs was that immediately post-partum, and he has, at what must have been great trouble, prepared and figured 12 frozen sections of it, and these form the basis of Part II. of the thesis on the displacement of the viscera, and the relation of the pelvic organs, post-partum, in kyphosis, where again Dr Barbour gives us an enormous addition to our knowledge of abnormal topographical anatomy.

Part III. consists of a clinical study of these deformities with regard to obstetrics, and brief references to reported cases of labour in such deformed pelves are given; but, unfortunately, though the writer gives us an accurate account of the probable mechanism in each of the varieties of pelvis, he is not able to add much to our knowledge of the practical management of labour.

The work must have been a very costly one to produce, and not being a text-book, cannot be expected to command a very wide circulation; but it will be found a valued addition to the library of all interested in scientific midwifery, and all such owe a deep debt of gratitude to Dr Barbour for having published it. It is a great pity that the University authorities have no fund at their disposal which might be utilized for the publication of theses of merit and utility, as the authors of such may not often be either able or willing to act with Dr Barbour's generosity towards medical science.

Elements of Surgical Diagnosis. By A. PEARCE GOULD, M.S., M.B., and F.R.C.S. Cassell & Co.: London: 1884.

A THOROUGHLY practical and reliable book, so far as we have investigated it. One which should prove useful to both student and practitioner.

De la Circoncision. Por D. FEDERICO RUBIO. Madrid.

THE author of this treatise is well known throughout Spain as foremost in the ranks of operative surgeons, and as a man of varied and extended erudition, who in the clinical reports of the Hospital de la Princesa, under his charge, lately published, has given new evidence of the acuteness and versatility of his mind in the relation of the case of a patient in whom he successfully extirpated the displaced and hypertrophied thyroid gland; and from a microscopic discovery of a peculiarity in the bulb of the hair, and certain specialties of her dress and bodily conformation, caused him to institute investigations, which led to the conclusion that in remote nooks of the Asturias there existed a cluster of families quite distinct from their Celto-Iberian neighbours, and whose type was identical with that of Assyrian captives he had noticed in the Ninevite inscriptions in the British Museum, affording evidence to his mind of traces of the Carthaginian and Phœnician slave trade so long carried on into Spain.

The object of the opuscule before us is a consideration of the relations of the prepuce with public health and morality, and the necessity of circumcision for improving and perpetuating the races of mankind and strengthening atavism.

He begins by discussing the anatomical and physiological characteristics of this structure, distinguishing it from the so-called analogue of the eyelids as protector of the subjacent organs, and denies that it is essential to the genetic functions; and views the delicacy of the glans epidermis resulting from it as disadvantageous in clothed and cultured peoples, however suitable for semi-nude savages; and in support of his argument refers to the *interiorization* of the reproductive apparatus in the lower occupants of the scale of the vertebrata, and *externality* in the higher, as in the mammifers, which he reasons out in a very ingenious manner; and finally avers that the lower the intellectual and moral status of the individual the more elongated the prepuce, and *vice-versa*, adducing illustrations from the most ancient Greek sculptures and from observations he had made himself among the young negroes in Cuba. The higher sensitiveness of the glans in civilized life is adduced as originating premature and unbridled carnality, leading in many cases to the wreck of the individual and the extinction of families. All of these would be obviated, and physical and moral cleanliness attained, Dr Rubio thinks, by the simple operation of circumcision, to which in great measure he attributes the extreme vitality of the Jewish race, the permanence of the type from the earliest ages, under the most trying circumstances and adverse conditions. In this, we think, he scarcely allows sufficiently for the long course of moral and intellectual training to which this race has been submitted; to their hygienic usages, and consciousness of inheritance of *blood* and *breed*, compared with which our most aristocratic are as plebeians of yesterday. The many millions of Mohammedans who for the last twelve centuries have uniformly sustained the ablation of "this impertinent piece of skin," have not as a whole evinced so much benefit from a procedure which, after all, seems better adapted for those males clothed in gowns than those that are breeched.

The literary interest, picturesque illustrations, and richness of material that characterize this and all the others of Dr Rubio's works we have been privileged to peruse, tend to heighten the general regret that neither he nor any other of the *sabios y literatos*, who now as ever abound in and adorn Spain, favoured us with their presence at our tercentenary University commemoration,—as dignified representatives of a nation which only requires the continuance of peace and unfettered commerce to resume the rank it held in former times as among the first in Europe.

Manual of the Dissection of the Human Body. By LUTHER HOLDEN. Fifth Edition. Edited by JOHN LANGTON. London: J. & A. Churchill: 1884.

THE merits of Mr Holden's text-books on Anatomy have been well known and appreciated by medical students for more than a quarter of a century. This edition of his manual, like the previous one, has been edited by Mr Langton, who may be congratulated on bringing it well up to date while preserving the special characters of Mr Holden's work. The principal fault we have to find with it is its large size, and this might have been avoided had the editor omitted all reference to the microscopic characters of the various organs and contented himself with the naked eye appearances. Thus we fail to see the utility of describing the minute anatomy of the membranous labyrinth, or the layers of the retina, in an ordinary dissecting-room guide. It contains upwards of 200 illustrations, many of which are original. Fig. 84, a drawing of the nerves of the back from Hirschfeld and Leveillé, is described as a "Diagram of the cutaneous nerves of the back (Quain);" and Fig. 117, a mesial section of the female pelvis, represents the anterior and posterior vaginal walls as widely separated. Although in general accurate, we have observed a few errors and omissions in the text. The inferior outlet of the ligamentous pelvis is described as lozenge shaped: like the ace of hearts would be more correct, and possibly as well understood by the student. The views of Professor His as to the position of the ovary are given, but we could not find any reference to his statements as to the shape of the liver.

Manual of Pathological Histology. By CORNIL and RANVIER. Vol. II. *Special Pathological Histology.* Part I. Translated by A. M. HART. London: Smith, Elder, & Co.

WE have here the first portion of the second volume of this most admirable work. It is divided into two sections, the first treating of the respiratory system, the second of the digestive. The microscopy of the lesions and pathological changes which occur in the various parts of these two most important sections of the economy are fully and clearly dealt with and described, and as an example of the complete manner in which the authors have executed their work, we would simply enumerate the various morbid conditions which are dealt with in the chapter devoted to the larynx, viz., catarrhal conditions, diphtheritic laryngitis or croup, erysipelatous laryngitis, variolous laryngitis, laryngitis of glanders, laryngitis of typhoid fever, syphilitic, tubercular, etc.

We are much pleased with the chapters on dilated bronchi and tubercle of the lungs, in the former of which, especially, good and very minute details are given of the microscopic changes which are found in the tissues affected. Among the introductory remarks to the subject of tuberculosis of the lungs there is a short but succinct account of the various theories which have been promulgated as to this most important condition from the time of Bayle and Laennec to the present day. The authors are strong adherents with those who hold as to the unity of pulmonary phthisis, as against the school of Buhl, Niemeyer, etc., who insist as to its duality.

The only reference we find made as to the presence or not of the tubercle bacillus is among some remarks on their general views on pulmonary phthisis. "They"—Villemin, Conheim, etc.—"have reaffirmed the unity of phthisis, and tried to cause it to be looked upon as a chronic infectious disease, due to penetration into the lungs of infectious microbes, which are drawn in with the respired air (Conheim). Klebs and Reinstadler have described in tubercles an extremely minute organism, the *monas tuberculosum*, which are in the form of granules joined two or three together, and animated by very lively movements. Dogs and rabbits inoculated with culture fluids containing this organism have given some positive results. More recently, Toussaint has cultivated a very small and immobile micrococcus, which is arranged in groups of three to ten, or in masses, and which he considers to be the parasite of the tubercle. Still more recently Koch, by cultivating fragments of tubercle, has succeeded in isolating microbes which resemble the bacillus of lepra in shape, but are more delicate. He has succeeded in inoculating many animals with tubercle."

The second section, as before mentioned, deals with the digestive system, from the mouth downwards to the lowest part of the great gut, the same plan being carried out here as in the case of the respiratory organs.

In that portion of the work now before us, the high standard attained in the former part is fully kept up. The illustrations scattered freely throughout the text are beautifully executed, and much assist the reader in following the descriptions of the authors.

The Anatomy of Acquired Flat-Foot. By J. SYMINGTON, M.B., F.R.C.S.E., Lecturer on Anatomy, School of Medicine, Edinburgh (*Journal of Anatomy and Physiology*, October 1884).

MANY clinical accounts of the deformity known as flat or splay-foot have been written; but few descriptions of its exact anatomical details exist, due mainly to the fact that surgeons seldom have an opportunity afforded them of dissecting the parts. Surgery is, therefore, considerably indebted to Mr J. Symington for his excellent paper upon "The Anatomy of Acquired Flat-Foot," which appeared in the *Journal of Anatomy and Physiology* for October. In it the author gives a careful and accurate account of a pair of splay-feet which he had an opportunity of investigating recently.

The following is a brief summary of the principal anatomical features of the deformity as described by him:—The inner border of the foot (as made out by Golding-Bird's method of measurement) was somewhat increased in length, differing, therefore, from Von Meyer's statement that this border is not longer than normal. The short muscles of the inner aspect of the sole were atrophied and fatty, probably from pressure of the flattened arch. There was no change in the tibialis anticus muscle. The peronei muscles were not contracted. The ligaments of the ankle-joint were very lax, its external lateral band less defined than normal, and considerably modified by pressure of fibula on calcaneum. Two extra facets existed on the lower end of the fibula, which articulated with corresponding ones on the outer surface of the os calcis. The external calcaneo-astragaloid ligament was destroyed, and the synovial cavity of the ankle was continuous with the posterior calcaneo-astragaloid joint, and also with the two abnormal articulations referred to above. The astragalus was altered considerably in position, and its long axis twisted inwards anteriorly. Its "processus fibularis" was only slightly altered, and had an articular facet upon its anterior surface for the calcaneo-astragaloid ligament. Mr Symington has observed this facet to be generally present in normal bones, and states that "when the astragalus is pressed on from above, the descent of the body of the astragalus upon the os calcis is checked by the contact of this surface with the interosseous ligament." An abnormal facet existed on the outer and upper part of the head of the bone for a corresponding one on the scaphoid. The neck of the bone was shortened, and its whole substance in a state of porosis, specially on the inferior surface. The os calcis was rotated inwards anteriorly, and showed the two abnormal facets on its outer surface already referred to. The scaphoid had a new facet for the head of the astragalus. The inferior calcaneo-scaphoid ligament was somewhat increased in length, specially on its internal aspect, differing thus from Von Meyer, who asserts that it is not so lengthened. The changes in the anterior part of the foot were slight. The outer border of the foot was not raised.

The author believes that "it is at the talo-tarsal joints that the deformity commences, and it is there that the displacements occur that constitute its most important features." He adopts Von Meyer's triangle (with a slight modification), in order to show the altered position of the "loaded" astragalus; but differs from him in believing that when the centre of gravity is only slightly internal to the sole triangle, the case is one of slight flat-foot. He thinks that in such a case there is only a "mechanical tendency" to the deformity.

Following Hueter, Mr Symington regards the first step towards the production of the deformity as the over-pronation of the astragalus, and considers the stretching of the inferior calcaneo-scaphoid ligament as rather a secondary change. As is well known, the weakening and relaxation of this ligament is generally stated to be the primary cause of the deformity. The paper is throughout a most interesting one.

The Medical Student's Manual of Chemistry. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry and Toxicology, University of Buffalo. London: Messrs Sampson Low, Marston, Searle, & Rivington.

THE long list of text-books on chemistry has received an addition in the *Medical Student's Manual.* Written by the Professor of Chemistry in the University of Buffalo, it aspires merely to be of use to medical students, and to contain only information necessary to the passing of certain examinations for medical degrees. The arrangement of the book is such as will render it of less value than it deserves. The terms "Metal" and "Metalloid" are ignored, as also the divisions of "Organic" and "Inorganic" Chemistry. We find all of the carbon compounds treated under carbon, thus making a somewhat unwieldy mass of information, which might more easily have been considered under the old title of "Organic" Chemistry. The book is well written and printed in good type, whilst the facts are generally condensed, or, where enlarged upon, the information is such as to warrant the extra space required. We doubt, however, if the book will ever be greatly in favour on this side of the Atlantic, as the classifications and facts are evidently arranged for American examinations, and are scarcely of the class usual in home tests.

The Patient's Vade Mecum; or, How to Benefit by Medical Advice and Treatment. By WILLIAM KNIGHT, M.R.C.S., and EDWARD KNIGHT, L.R.C.P.E. London: Chatto & Windus: 1884.

THE *grandmotherliness* of the age has many phases, and this volume is one of the funniest of them. Its aim is to explain the questions a medical man asks his patient, and to guide the patient as to how he ought to answer. Few of our patients are likely to master it before seeking our advice, and we are glad of it, for we enjoy their individuality and should regret its extinction; while we also feel that much of the physician's skill lies in the rapid sifting of the important from the unimportant in a patient's story. The book savours of the nursery; but its intention is good, as grandmotherly intentions usually are.

The Retrospect of Medicine. Edited by W. and J. BRAITHWAITE, M.D., etc. Vol. LXXXIX., Jan. to June 1884. London: Simpkin, Marshall, & Co.

THAT this work continues to appear with punctual regularity is sufficient proof that it fills what would otherwise be a gap in medical literature. In fact we know men who depend on it for much of their modern knowledge; and few men take it up without finding something which they have overlooked. A considerable responsibility lies with the editors; and, on the whole, they select well.

Official Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. First Annual Issue. London: Charles Griffin & Co.: 1884.

THIS work, more particularly in its future issues, is likely to supply a distinct want. In addition to a short account of the various societies throughout the United Kingdom, it will give a list of the papers read before or published by each of them. A prospectus of this kind does not require any recommendation from us. If we might, however, make a suggestion, it would be that the cost of the work, reasonable as it is, might be diminished by publishing it in a less sumptuous fashion.

Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Chicago: W. F. Keener. London: Trübner & Co.: 1884.

AT a time when it becomes necessary to know the value of an American degree or diploma, a volume like the present proves very useful. It gives an abstract of the laws governing Medical Education and practice in the various States and Canada, as well as a short account of the different colleges in each. The ease with which a diploma can be obtained in the majority of the States' colleges is somewhat surprising. The information is very complete, and is guaranteed by the Illinois Board of Health, by whose permission the book is published.

A Popular Guide to the Use of the Bath Waters. By J. G. DOUGLAS KERR, M.B., C.M. *The Bath Herald* Office: 1884.

THIS booklet is intended for those who do not care to wade through the more elaborate works on Bath and its waters. It is easily read and cheap. Those who think of Bath as a health resort may learn something by a short perusal of it before going.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIV.—MEETING II.

Wednesday, 3rd December 1884.—DR LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF NEW MEMBERS.

The following gentlemen were elected Ordinary Members of the Society:—Thomas R. Scott, M.B., C.M., Musselburgh; R. Milne Murray, M.A., M.B., C.M., F.R.C.P. Ed., Edinburgh; A. Murray

Gibson, M.D., Portobello; A. S. Cumming, M.B., C.M., Edinburgh; Ernest F. Neve, M.B., Edinburgh; W. C. Greig, M.B., C.M., Edinburgh.

II. EXHIBITION OF PATIENT.

Mr Chiene showed a woman, æt. 32, on whom he had performed the operation of ŒSOPHAGOSTOMY. She suffered from a tumour situated behind the box of the larynx, which it was at first hoped was specific, but anti-specific remedies had failed to produce any effect. When she was unable to swallow and was dying of inanition, the operation of œsophagostomy was proposed in preference to gastrostomy. Mr Chiene thought he had made a slight improvement on the ordinary method of opening the œsophagus, by first incising the muscles,—the anterior fibres of the sterno-mastoid and the posterior fibres of the sterno-hyoid and sterno-thyroid. By so doing the access to the œsophagus was rendered much easier, as was also the stitching of the mucous membrane to the skin, the tension being reduced. The tumour had diminished since the operation was performed, and if she improved in weight an attempt might be made to remove it. She was easily fed by the new mouth in the neck, the only disadvantage being the want of saliva.

III. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Mr A. G. Miller* showed a specimen of ANCHYLOSED KNEE-JOINT removed by amputation from a boy æt. 17. Nearly three years before, the lad had met with an accident to his left knee from a waggon. This set up synovitis, which was treated in a country place in England by poulticing, and ended in suppuration and anchylosis. Subsequently erysipelas occurred, and one of the incisions made to let out the pus severed the anterial tibial nerve. As a result the anterior tibial muscles were paralysed. The joint also stiffened. About nine months ago he came into the Infirmary anxious to have something done. He had previously had three operations performed in Sunderland. On admission there were two or three sinuses and extensive caries of the lower end of the femur. Mr Miller enlarged the sinuses, and removed the carious bone, using chisel, gouge, and spoon. This was succeeded by a return of the disease. He had noticed in an American journal a recommendation that in such cases that the condyles should be removed, as other operations always left a large cavity in the lower end of the femur which nature was incapable of filling up except in young children. He therefore removed the patella and condyles, preserving the periosteum. In the course of the operation he found the head of the tibia involved as well as the lower end of the femur. He contented himself with simply scraping away the disease from the tibia, but he now regretted he had not treated it similarly to the femur, for caries returned in it and necessitated amputation. The operation, so far as the femur was concerned, had been successful, the tissues having remained healthy.

2. *The President* showed (*a.*) A DOUBLE UTERUS, one horn of which had been recently delivered of a dead child at the full time. (*b.*) The HEART, LIVER, and KIDNEYS from a fatal case of railway injury. These organs were extensively lacerated though the skin had not suffered.

3. *Dr Andrew* showed the BRAIN and CORD removed that day from a boy æt. 7, who had died in the Sick Children's Hospital five weeks after an injury to his sacrum. He was admitted ten days after the injury with typhoid symptoms, slight pain over the sacrum, tenderness down one sciatic nerve, and discoloration. A week after admission an abscess formed. It was opened, and found to be superficial. Ten days later a second abscess formed under the scapula, and a third on the left buttock. During all this time the temperature was 102° or 103° F. at night, and there had been profuse diarrhœa with dry tongue and typhoid symptoms. Later on came slight head symptoms, with threatening of meningitis. The typhoid symptoms were improving till the night of the 1st December, when suddenly he became cold, faint, and comatose, and died. On examining they found that the abscesses were superficial, that in the chest there was some slight pneumonia, and secondary abscesses in the kidneys. On opening the head they found some fresh lymph over the upper surface with the vessels enlarged, and on raising the brain a large mass of extravasated blood continued down over the whole course of the spinal canal; and on sawing the bone they found caries of the sacrum itself. The case was one of interest from the amount of blood extravasated without direct injury. So far as he could make out, he believed the blood passed upwards from vessels ruptured about the diseased bone.

4. *Dr Byrom Bramwell* showed the HEART of a young person who evidently at some time or other had had a general attack of endocarditis. The mitral valve was contracted. There were some small old vegetations on the aortic segments. On the tricuspid valve there were also some small old vegetations, and the interest of the case lay in this. Right-sided endocarditis was thought to be rare. Dr Bramwell believed that view to be erroneous. In the majority of cases he had met with in which there had been a severe rheumatic affection, and in which there had been an examination within a short time after the attack, there was evidence of right-sided disease in the shape of minute vegetations on the tricuspid valve. This had important practical bearings. If the tricuspid was frequently affected, it must in most cases recover completely from the endocardial inflammation, for marks of disease were not usually found in later life. If tricuspid endocarditis could be recovered from, there was every probability that in many cases left-sided endocarditis was also curable.

5. *Mr Joseph Bell* showed a FATTY AND FIBRO-CELLULAR TUMOUR

removed that day from the right parotid gland and region of the pharynx of a middle-aged woman. Externally the tumour had existed for several years, and she had been advised to have it removed; but the advice was not taken. When admitted she was observed to breathe with difficulty, and on examining the mouth a tumour was felt projecting into the pharynx. In the erect posture, and holding the head forwards, she could breathe easily; but in the recumbent position the breathing was much more difficult, especially when she fell asleep. This internal tumour was growing with great rapidity. It had not existed quite a year. The external tumour was lobulated, firmly adherent to the jaw, bound down by fascia and below the pes anserinus. He himself and some of his colleagues thought they could trace a connexion between the two tumours. He was also of opinion that the tumours were simple in character. The question was, What should be done? The giving of chloroform in such a case presented some danger, more particularly as there was a very large thyroid, which also rendered tracheotomy difficult. It was proposed to open the trachea first, to be prepared, lest the internal tumour should have to be removed through the mouth. This was accordingly done, and the operation on the tumour commenced from the outside, an incision being made over the parotid. The pes anserinus was pulled to one side, and the finger passed under the ramus of the jaw round the tumour, which was found to have a neck and to be connected with the internal tumour. A little traction easily shelled this out from the pharynx. Slight hæmorrhage followed. It was agreed to leave the tracheotomy tube in for at least twenty-four hours, and he had every hope that the patient would do well. *December 24th.*—Patient has made a rapid and complete recovery.

6. *Mr Chiene* showed a CALCULUS removed by nephro-lithotomy. The patient suffered from symptoms of stone in the right kidney for four years. Medicinal treatment gave no relief. An exploratory incision was made in the right loin. The finger passed in over the anterior surface of the kidney felt a distinct elevation in the lower half of the organ, which was made out by aid of a fine needle to be a calculus. The incision was carried down to it, but it was not till it had been firmly grasped by a vulsellum that it could be removed. A drainage tube was inserted for two days. On the third day the urine ceased to come by the wound.

7. *Dr Charles MacGillivray* showed the contents of a DERMOID CYST removed from the frontal region of a young man's scalp. The interest of the case was that the cyst lay in a depression in the bony skull almost simulating meningocele.

IV. ORIGINAL COMMUNICATIONS.

1. The Senior Vice-President, Dr D. Wilson, took the Chair to allow the President to read his CASE OF POISONING WITH NITRATE OF POTASH, ETC., which will appear in a future number of this Journal.

The Chairman thought the President's paper was especially valuable because of the advice given with regard to professional conduct in delicate and difficult circumstances.

Dr Ireland never had the fortune or misfortune to meet with a case of poisoning by nitre. When he commenced his medical life he was interested in the treatment of rheumatism by nitrate of potash in large doses. He had tried the remedy when a student in his dispensary cases to the extent of half an ounce daily. The President had not told them at what dose the drug was poisonous. It had been given in Paris up to 60 or 70 grammes (about 3 ounces) daily, but well diluted. He remembered Valleix said he had seen two cases of sudden death where 12 grammes of nitrate of potash had been given. The symptoms were coldness, weakness of the extremities, and sinking.

Dr Craig said the President's paper was not one that left much room for discussion, because most of them would agree with the ethics of it. There was no doubt that poisoning by nitrate of potash would depend on the amount of concentration of the drug, as in the case of any other irritant. He always remembered a remark made by Prof. Maclagan when he was a student, that nitre was one of the few poisons for which they possessed no antidote. It was difficult to say what might be a fatal dose of it or any other irritant on account of the vomiting set up. If a sufficient quantity were vomited the patient's life might be saved. He thought, however, that from half to one ounce in a concentrated form would probably prove poisonous.

Mr Annandale rose to speak on the question of ethics in such cases. He wished to ask the President whether in a case of suspected slow poisoning it would not be better for a young practitioner to call in a skilled toxicologist as a consultant before informing the Procurator-Fiscal or other authorities.

Mr Caird drew attention to Sir Robert Christison's dictum that in such cases the practitioner's duty was to inform the patient only of his suspicions. He should like to know if Dr Littlejohn approved of this advice.

The President said he quite agreed with Professor Annandale, and in large towns it was probably the best and easiest course to have first of all a consultation. In country districts it was not so practicable. When he advised that the medical attendant should communicate his suspicions to the authorities, he referred more particularly to cases where death had occurred Dr Bramwell had asked him an important question privately. What would he do in England? He confessed there was more difficulty in keeping any investigation private there; but he thought the proper thing would be to write to the coroner a letter, asking him to regard the communication as confidential. If the patient were still alive the difficulties were greater. Sir R. Christison's advice might be followed, but he thought it would be hazardous to do so in all cases.

It might either prove too great a shock or might make the patient attempt to shield the suspected person, and thus defeat the ends of justice.

2. *Mr Symington* read his paper ON THE ANATOMY OF THE EXTERNAL AUDITORY MEATUS IN THE CHILD.

Dr M'Bride stated that the paper just read was so full of carefully collected and demonstrated facts that it admitted of but little discussion. He felt sure that both anatomists and aurists could not help being grateful to an observer so careful as Dr Symington for taking up a subject which was so ill understood, and about which so many conflicting views existed. There were, however, two points which he would like to refer to. In the first place, he would like to ask Mr Symington how he accounted for the rapid change in the position of the tympanic membrane which must, according to his diagrams, occur between the seventh and ninth months. In the second place, it was stated by Mr Symington that the development of bone in the formation of the osseous portion of the meatus began below and in front. In this statement Mr Symington directly opposed the views of Professor Zuckerkandl of Gratz, who was looked upon on the Continent as one of the first authorities on the anatomy of the nose and ear. He had shown that ossification occurred by the further development of two tubercles situated on the tympanic ring. These tubercles finally coalesced, leaving sometimes a permanent foramen in the anterior inferior wall—the "ossificationslücke" of Von Tröltsch. This opening is commonly found up to the second or third year. Dr M'Bride, from an examination of specimens shown him by Professor Zuckerkandl—with whom he had made many dissections of the ear—had little doubt of the correctness of these views, which pointed to a regular, definite, and constant process in the ossification of the external auditory meatus.

Dr Kirk Duncanson said he had great pleasure in hearing Dr Symington's valuable paper, but thought it was deficient in that there had not as yet been enough dissection. Although much superior in its method of investigation to former methods, and to what he (Dr Duncanson) had himself done, still there might be faults found, as, for example, the membrana tympani in the six-months' fœtus diagram was shown not attached to the annulus tympanicus at all, but apparently to the inner wall of the tympanum. That might be due to the action of the saw carrying these soft delicate structures before it, and the same cause might apparently lengthen the external auditory meatus. He certainly, in many dissections of the ear in the fœtus of different ages, had never but found the membrana tympani attached to the annulus tympanicus as in the adult, except at its upper portion where the bone is wanting. He had always found the apparently horizontal position of the membrana tympani in the fœtus as shown in the diagram. Was the more perpendicular position in the child and the adult not brought about by the groove carrying the membrane in the annulus tympanicus being carried outwards as ossification proceeded in the fibrous or fibro-cartilaginous plate in the floor and walls of the meatus? Or was this assisted by an increase in the bony parts forming the base of the skull? Mr Symington's measurements ought to be continued, taking them from the fixed points, both of the outer and inner extremities of the meatus in fœtal and adult skulls. He thought, however, that some deformity must take place in the freezing and section-cutting of frozen parts, as shown by the diagram representing the normal adult ear, which could not be correct.

Mr Symington said that the ossification which extended outwards from the tympanic ring to form the tympanic plate formed the anterior and inferior wall of the osseus meatus. He had not completed his investigations with regard to the inclination of the membrana tympani. With reference to Dr Kirk Duncanson's criticisms of the diagram, he had to state that both the section and the drawing he had exhibited showed the membrana tympani attached to the annulus tympanicus; but the artist he had employed to make the large diagram had made the mistake of separating them.

[It is gratifying to note that our esteemed contemporary *Medical Times* has, in a recent review entitled "The Log-Books of the Societies," the following good word to say of the lately published volume of Transactions of the Edinburgh Medico-Chirurgical Society:—"In one respect this volume is superior to all those that are included in this notice, and that is in the admirable way in which the discussions are reported, the value of the papers being much increased thereby."]

CARLISLE MEDICAL SOCIETY.

A MEDICAL SOCIETY has been formed this Winter for Carlisle and neighbourhood. The office-bearers for the first session are:—*President*, W. B. Page, F.R.C.S.; *Vice-President*, Stewart Lockie, M.D.; *Hon. Sec.* William Douie, M.B. The first meeting for the session was held on Thursday, November 11th, at 8 P.M.; Mr Page in the chair.

Mr Page, in an opening address, gave some reminiscences of his work in Carlisle during forty-three years.

Dr Brown showed a MALE PATIENT, aged 30, who had contracted syphilis about eighteen months ago, and who now exhibited the following nervous symptoms:—He was dull and stupid; his memory was very defective; he suffered from frontal headache. The speech was thick; hand-writing shaky. There was increased tendon reflex in both knees. There were atrophic changes in the right wrist, and in the metatarsal phalangeal joint of the right small toe. There was no paralysis, and no retinal changes.

Dr Lediard showed a CHILD, aged 14 months, suffering from meningocele, which had gradually increased since birth.

Dr M'Laren showed a CAST and SKULL of an infant, who only lived a few days, with a large meningocele, which contained the cerebellum. The deficiency was very great both of the skull and the cervical vertebræ.

Dr Lediard showed a PATIENT in whom the right half of the tongue had been removed by scissors. The remainder of the tongue was of fair size, and had rotated on its axis, so that the under surface looked somewhat to the left side. The speech was very fair.

Dr Lediard showed a PATIENT whose knee-cap had been wired 14 months previously, three weeks after the accident. He was now able to walk well and could work without difficulty.

Dr Brown showed the LARYNX of a woman, aged 60, who had died suddenly of spasm. There was a cicatrix extending from the epiglottis to the right arytenoid cartilage. There was a history of syphilis.

Dr Greenlees (Garland Asylum) showed a SUB-PERITONEAL TUMOUR OF THE UTERUS, and a MICROSCOPICAL SPECIMEN from the same, showing wavy fibrous tissue, but no muscular tissue. He also showed an ANEURISM OF THE ABDOMINAL AORTA, which had opened into the small intestine, 8 inches below the pylorus. There was no atheromatous deposit in the arteries. The patient had three attacks of hæmatemesis, and died 36 hours after the first.

Dr Lockie showed an ANEURISM OF THE ARCH OF THE AORTA. The chief interest of the case lay in the fact of the patient having been known to have a thoracic aneurism for so long as five years. The treatment consisted in the administration of iodide of potassium in large doses. Death had resulted from hæmoptysis.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

COCAINE.—This is an alkaloid obtained from Coca, the leaves of *Erythroxylon coca*. It has the composition $C_{17}H_{21}NO_4$. When pure it is in colourless prisms, with a bitter taste. The leaves were used by the aborigines of South America before their conquest by the Spaniards. They are officinal in the *United States Pharmacopœia*. They have long been used to enable men to endure unusual fatigue, and to abstain from food for a prolonged period; and it has been supposed that the virtue was due to this alkaloid—cocaine, called by others cucaine. Sometimes the hydrochlorate of cocaine is used.

In the *British Medical Journal* for 13th December last, Dr Morell Mackenzie says:—"I have found hydrochlorate of cucaine extremely useful in operations for the removal of nasal polypi. It is not enough to paint the growth itself, nor even the parts immediately surrounding its base, the solution should, as far as possible, be applied to the whole of the mucous lining of the nasal fossa. The remedy has proved of service in my hands in those cases of laryngeal phthisis in which there is great odynophagia, owing to the swelling of the epiglottis. Patients who before could swallow only with extreme pain and difficulty, have been enabled to take food with perfect ease and comfort. The best time for swallowing appears to be about ten minutes after the application, whereas operations can be done after an interval of from three to five minutes. The difference is probably to be explained by the fact that in the former case the patient feels himself at first unable to make the attempt to swallow from the total abolition, locally, of all sensibility to nervous impressions. In all cases the anæsthesia persists for about two hours. Apart from the restoration of the power of taking nourishment, much relief is given by the mere absence of pain. When it is remembered how much suffering is caused to patients with inflamed or ulcerated throats by the continual necessity of swallowing or coughing up the copious secretion which is so troublesome in these cases, it is a comfort to have at hand a remedy which renders these acts painless without in any way affecting the general system. Both for the larynx and for the nose I have employed a 20 per cent. solution of the drug."

In the same journal Dr Murrell, of London, says:—"During the last three weeks I have used cucaine in six cases of supra-orbital neuralgia with an amount of success which, I think, justifies a further trial of this mode of treatment. I commenced by rubbing in a 4 per cent. aqueous solution of hydrochlorate of cucaine, but no beneficial effect was produced, and it was clear that absorption did not take place. I next tried a hypodermic injection over the painful spot of at first an eighth, then a quarter, and finally half a grain of the same solution. The relief was almost instantaneous, and lasted from twelve to twenty-four hours, according to the dose employed; but the objection to this mode of treatment is the pain caused by the introduction of even a clear short needle. I abandoned this plan, and tried the inunction of first a 10 and then a 20 per cent. solution in chloroform. This gave fairly good results; but the chloroform evaporates so quickly, as to leave much of the salt on the skin. A better solvent is oil of cloves, and I now use a 20 per cent. solution of the hydrochlorate in that menstruum. I rub in from 5 to 10 minims with the finger, and find that almost instant relief is afforded. We hear a great deal of the toxic action of the drug, but I have never met with bad symptoms of any kind."

Cucaine has been found a powerful and useful anæsthetic in operations on the eye. In the same journal Mr Lloyd Owen, Birmingham, states that equal parts of an 8 per cent. solution of hydrochlorate of cucaine and of the liquor atropiæ sulphatis, *British Pharmacopœia*, was found to give immediate and enduring relief in keratitis and corneal ulcer, and also in sclero-conjunctivitis and iritis.

In the same journal Mr Frank H. Hodges states that in a case of a wound in the sclerotic, through which the vitreous humour was escaping, after three instillations of solution of hydrochlorate of cocaine (1 grain to the ounce), at intervals of five minutes, the conjunctival surface was found to be anæsthetic. He was thus enabled to stitch up the wounds without either assistant or eye-speculum, the consciousness of the patient allowing him to assist me in the operation.

Dr Watson Campbell, of Duns, in the same number of the *British Medical Journal*, states that he used a tincture in which every 20 ounces represent 5 ounces each of coca leaves and of hops, and says:—"I have found a drachm of this taken in a wineglass of sweetened warm water, three or four times a day, or as required, a most useful medicine in many cases,—as a restorative in physical exhaustion from any cause, as a calmative and hypnotic in cases of mental irritation and insomnia, and in cases of weak cardiac action with frequent recurrence of threatened syncope. It has appeared to invigorate the heart and check these disagreeable recurrences. Even in cases of continual and severe suffering from local disease, I have found it give great relief—so great as to allow of refreshing sleep."

MULLEIN-LEAF IN THE TREATMENT OF PHTHISIS.—Professor Quinlan states, in the *British Medical Journal* for 13th December, that he has used the leaves (*Verbascum thapsus*) for several years extensively in the treatment of phthisis, but has never experienced the ill effects described by other observers. He also adds that he has seen these ill effects when the leaves of other species of verbascum were used.

JABORANDI IN ERYSIPELAS.—Dr Sydney Thomson recommends as a local application the following mixture:—24 parts of fluid extract of jaborandi, 4 parts of glycerine, and 4 parts of laudanum, to be painted with a feather every four hours; and states that he has always obtained excellent results.—*Therapeutic Gazette*, Nov. 1884.

HAMAMELIS VIRGINICA.—Hamamelis Virginica has been acknowledged as an astringent of no low-grade value ever since made known to Anglo-Americans by the Indians. Exaggerated statements of its virtues by irregular practitioners, and by the vulgar, instead of bringing it into favour, have only served to throw around it the odium of being a great remedy among the crude and the ignorant. But though a remedy—like a man—often suffers in reputation by the company in which it is found, none the less may excellent qualities be discerned by the unprejudiced observer amid such surroundings. It has been with me, as no doubt with many others, a rule of action, that when the remedy of main reliance in the treatment of a disease proves on trial after trial unsatisfactory, not to rest until a better one is found—one that will fulfil all reasonable objects. It was in the search for such a remedy as a local application for hæmorrhoids that I was led, some twelve years ago, to try the hamamelis. Palliatives in this disorder are frequently called for by those who firmly refuse all surgical interferences. After having tried almost every remedy mentioned by respectable authority for the above purpose, with very unsatisfactory results, I was induced to give the extract of witch-hazel a trial. The reports almost invariably were so favourable, that the desideratum seemed to be at last attained. Its application not only lessened, but often wholly checked, the bleeding, besides assuaging the suffering to a notable degree. Of course, no benefit is looked for where the vessels become strangulated and inflamed; but when they can be readily returned, well anointed with the hamamelis, benefit is quickly perceptible. The pain and soreness are soon mitigated, and a striking diminution of their size is ere long apparent. Neither this application nor any other is of much benefit unless aggravating causes are avoided, such as very dry and long-retained fæces, diarrhœa, and obstructed or turgid states of the portal circulation. With these sources of aggravation removed, the fluid extract of hamamelis, with an equal portion of glycerine, and a little starch or other excipient, for convenience of application, well smeared over the piles, and these returned, will do all and more than any other application. A lady, who had been a great sufferer from a large cluster of bleeding piles for more than twenty years—now a little better, then worse—and who had tried every remedy told her, said that no application had equalled in relief the one I gave her. Of course it only afforded, in such a severe and chronic case, decided mitigation; but it led her trustfully to submit to my judgment, and get rid of the trouble permanently by the hypodermic use of a solution of persulphate of iron, which she did. In less aggravated or long-standing cases, readily reducible, or when blind and bleeding, the application each day of the hamamelis will often effect what seems to be a permanent cure, or at least indefinite absence of all the symptoms of the disorder. The value of the hamamelis in hæmoptysis is at least as well assured to me as ever ergot has been. The evidence here of casual relation is, however, beset with difficulties. The disease is nearly always a brief and self-limited one, and more than one agent is usually employed, so that it is difficult to say to what one is chiefly due the abatement. It is usual, for instance, to employ revulsives—hot foot-baths and an opiate—to quiet the cough. The following case has thrown a point or two of light on this topic, as the blood expectoration had become somewhat chronic. It was that of a large-framed man, in moderate flesh, and by occupation a glass-blower. He had been under the care of another physician, who had kept him continuously under full doses of ergot for three days, but without any impression upon the sanguineous expectoration. This was not his first attack; he was not excited. The quantity at no time of the attack had been large, and it was of bright red hue. A few doses of morphia were prescribed to blunt bronchial irritability, and at the same time drachm doses of the hamamelis extract were ordered every three hours until the colour disappeared. The effect was almost immediate, and so far he has not had a like recurrence. Possibly the opiate may have had as much to do with the arrest of the hæmoptysis as the hamamelis. Of this the reader can form his own opinion. The thought may occur, granting the hamamelis to be an active astringent, how, by its administration per orem, does it produce a constringent effect upon the bronchial tissues? The answer is sufficiently obvious—it acts according to the principle that certain agents manifest their affinitive energy only upon certain structures of the body. Administer morphine hypodermically or otherwise, and its potential affinities are spent upon nervous tissue, and the secretive activity of the mucous membranes. If there be doubt that the hamamelis acts as a sedative upon bronchial secretion, a simple and allowable experiment will remove it; to wit, administer to one suffering from bronchial catarrh several doses of the hamamelis, and a diminishing and tightening effect upon bronchial secretion will be sufficiently obvious (by J. R. Black, M.D., of Newark, Ohio).—*Medical and Surgical Reporter*, Oct. 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

ERYTHRASMA.—It would appear that there are at least two forms of parasitic disease which affect the inguinal and axillary regions, which have been hitherto confounded. One of these is erythrasma, originally described by Bärensprung in 1862, and eczema marginatum. This latter was not for some time admitted by Hebra as parasitic in its nature, and possible confusion with erythrasma may account for this, as the fungoid elements in the latter are much smaller than those met with in true eczema marginatum, or trichophytosis cruris, as it has been recently named. Dr Gustav Riehl, of Vienna, has summed up all that is known and what he has himself observed in a paper in the *Wiener Medizinische Wochenschrift*, No. 41 and 42, 1884, on erythrasma. It appears in the form of roundish sharply defined spots, from the size of mere points to that of the palm. At first these are more or less bright red, either at the margins or all over. Older patches show the erythematous reddening less distinctly, or may be tinged yellow or brown. Over them the upper layers of the epidermis are easily separated by scratching with the nail. Where the surface is irritated, as on parts in contact, the patches are reddish-yellow or reddish-brown. The margins of the patches are either crescentic, or from the coalescence of several exhibit a series of crescents. Those patches which are little reddened show no elevation above the general surface, yet when the finger is passed over them a sensation of roughness is imparted as contrasted with the sound skin. On erythematous patches the edge is slightly prominent, and the desquamation is more marked there. Otherwise the skin on diseased parts is little changed; even after years the papillary layer has undergone no further alteration than injection of the vessels, with consecutive deepening of pigmentation. Papules or vesicles or other results of exudation are never seen. In most cases there is an absence of subjective sensations. Some persons complain of a predisposition to intertrigo, and some observe a temporary itchiness with increase of erythema. Erythrasma commonly affects those parts on which, as a result of mutual contact, of perspiration or friction, the normal epidermis appears looser and more moist. Thus the scrotum, groins, fold of the nates, and axillæ are the most frequent and often the exclusive localities implicated. Sometimes the disease, spreading slowly, advances further, as in one instance cited where it reached three fingers' breadth over the symphysis pubis and half-way down the thigh. Rarely it may affect the trunk. In general the affected persons can tell nothing of the commencement of their trouble, which is easily accounted for when one bears in mind the difficulty of seeing the points, and the slight annoyance the complaint occasions, and this latter accounts for the apparent rarity. Out of 86 males examined one day at Professor Kaposi's clinique, and all of whom came for other reasons, three examples of erythrasma were discovered; only one of the three was aware of the patches being there. The disease has never yet been seen in children; it seems infrequent in women. Riehl's youngest case was 16, his oldest 58 years old. The parasite bears most resemblance to the microsporon furfur in arrangement, but the mycelium and the gonidia attain scarce one-third the dimensions. The seat of the fungus is constantly the horny layer. It is never found in the prickle cells, nor has it been seen in the hairs or follicles. It has been named microsporon minutissimum. The disease when treated tends readily to recur. Whether it spontaneously disappears is uncertain, but the analogy which erythrasma bears to tinea versicolor, and its rarity in elderly persons, points to this. The treatment is similar to that of the last mentioned disease. The rapid exfoliation of the fungus bearing strata of epidermis by soap or tincture of iodine is recommended.

XERODERMA PIGMENTOSUM.—Professor Pick, of Prague, has described three cases of this disease which have recently been under his care. Two sisters and their brother were affected. The symptoms began at the age of eighteen months, and steadily progressed. Spots like freckles appeared in the neighbourhood of the eyes, spread over the forehead and face, and then similar spots showed themselves on the backs of the hands, and later on the feet, and from these peripheral parts at first slowly, later more rapidly, advanced inwards. Besides the freckle marks there were darker, and sometimes slightly elevated, pigment spots and warty growths, dusky-brown in colour, some small and hard, some larger and elastic and spongy. There were also red macules showing dilated capillaries ramifying over them. Interspersed among these were white scars mostly depressed, and some permeated by small vessels. The freckles and lenticular pigmentations predominated in the peripheral parts of the affected skin, and also where the disease approached normal skin. The warty tumours occupied chiefly the centres of the diseased areas, while the scars were seen on those parts where the disease had lasted longest. Examination of the warty growths showed them to be of the nature of spindle-cell sarcomata. The ages of the persons were 19, 17, and 2¾ years respectively. Pick regards the disease as a local one affecting the skin, though he admits an innate predisposition. The commencement of the ailment on exposed parts points to the action of heat, light, air, etc., and he cites an interesting case of scleroderma, where the first symptoms appeared directly after a sunstroke. As regards treatment he alludes to Kobner's successful case of sarcoma, (not melanotic, however,) in which subcutaneous injections of arsenic were employed, and states that in one case of sarcoma he had seen a temporary involution under arsenical treatment. He suggests as the most suitable name for the disease, melanosis lenticularis progressiva. Admirable chromo-lithographs illustrate the paper, and the appearances presented are identical with those in Vidal's case, showing that the disease presents very distinct clinical characters. — *Vierteljahresschrift für Dermatologie und Syphilis*, Heft 1 and 2, 1884.

ON THE PATHOLOGICAL SIGNIFICANCE OF PRURIGO.—Dr Gustav Riehl contributes to the current number of the *Vierteljahresschrift für Dermatologie und Syphilis* an admirably reasoned paper on this subject. Opinions are divided as to the significance of the eruption in prurigo. Hebra and his followers regard the papules as primary, and the itching as induced by them. Casenave and some recent authors view the sensation of itchiness as primary, as the expression of a neurosis, while the papules are to be reckoned as among the consequences of scratching. In order to decide this question, Riehl traces the history of prurigo from its commencement, and notes that when its first manifestations are observed in infants, there are none of the papules seen in adults. In place of them, wheals of various forms and sizes are irregularly dispersed over all parts of the body in the case of children who eventually become affected with typical prurigo. Towards the end of the first and in course of the second year of life, small wheals are seen interspersed among the larger, and these exhibit a predilection for the extensor aspects of the trunk and extremities. As the child advances in age these smaller wheals increase in number with each fresh outbreak, while the larger become fewer, till, when three or four years is reached, only papules from the size of a millet to that of a hemp seed are seen, and wheals only in an exceptionally severe exacerbation. These papules occupy the recognised situation in prurigo. Urticaria thus constitutes the first symptom, and becomes gradually transformed into a typical prurigo. Now and then in adults typical linseed-sized wheals can be seen, or by gentle friction the papules can be seen to enlarge into such. Another element in deciding the question is the anatomical structure of the prurigo papule. This has been very differently described, and the cause of this lies in the difficulty of finding an isolated papule which has not been meddled with. Riehl sums up the morbid anatomy in "an acute inflammatory alteration in the upper layers of the cutis." Previous observers have depicted the changes wrought by a chronic dermatitis. The disease, according to Riehl, cannot be regarded as a neurosis, of which pruritus is the expression, and this is clinically quite distinct from prurigo. "The statement of many of those affected with prurigo, that they sometimes suffer from itching in the stages of intermission, is easily explicable when one takes into consideration the form of dermatitis always met with in such persons. Every eczema, as for example the chronic scaly form with lessened glandular secretion, can evoke itching, and in like manner the chronic scaly dermatitis in prurigo." In what manner the peculiar localization is brought about must for the present be held as unexplained, but an anatomical cause, perhaps an innate abnormality in the formation of the skin, may have to do with it. We meet with prurigo frequently in several children of a family, and know that ichthyosis, which all agree is a congenital anomaly of epidermis formation, occupies the same localities. The preference exhibited by other diseases for the extensor aspects, as erythema multiforma, purpura, psoriasis, would indicate rather a local cause than one dependent on nerve influences. From these considerations it would seem that prurigo should be classed with urticaria, lichen urticatus being nearly allied.

THE ELIMINATION OF MERCURY DURING AND AFTER ITS CUTANEOUS

EMPLOYMENT.—Dr Schuster, Aix-la-Chapelle, found that in 50 per cent. of cases in which mercurial inunctions were or had been employed for the cure of syphilis, no mercury was found in the urine though regularly present in the fæces. On substituting for Fürbringer's method one suggested by Schridde, the presence of mercury could in all such cases be determined in the urine. He concludes that the elimination of mercury from the system must be completed within some determinable time, and for ordinary courses of inunction he places this at six months, and adds: "Therefore it is not accidental that frequently in from four to six months after mercurial treatment the vanished syphilitic symptoms reappear, and show themselves more decidedly both in the early and the late manifestations of syphilis. After the elimination of mercury has continued for four months, there is too little left in the system to retard the renewed increase of the syphilis in such relapsing cases. It is advisable, therefore, in view of the eliminative period of the incorporated mercury, to repeat the mercurial treatment of syphilis in from four to eight months after the course which has suppressed the syphilitic manifestations according to the earlier or later expectation of fresh symptoms."—*Journal of Cutaneous and Venereal Diseases*, September 1884.

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D., and WILLIAM RUSSELL, M.D.

MIGRAINE.—Brown agrees with the majority of physicians in regarding this troublesome malady as a neurosis. About the age of 50 the attacks present a more purely neuralgic character, preferably of the ophthalmic branch of the fifth nerve, while at 60 the attacks cease. He uses Anstie's observations, as to the local trophic changes brought about by the condition, to strengthen his argument. He also recognises its relationship to epilepsy, and gives an interesting case in which it was associated with asthma. The migraine seems to have been largely replaced by asthma during a change of residence, but the migraine regained its ascendency on returning to the former residence. He thinks the attack can be averted, and gives thirty grains of guarana or three to four grains of caffeine every twenty or thirty minutes for three times unless the symptoms show signs of abating sooner. If there has been unusual fatigue or other cause which is known to induce an attack, thirty to sixty grains of bromide should be taken at night, and the bowels should be acted upon by a laxative if necessary.—*Boston Med. and Surg. Journal*, 23rd October 1884.

DOES REFLEX PARALYSIS OCCUR?—Dr Nixon, senior physician to the Mater Misericordiæ Hospital, in a paper displaying much erudition, and marked by dialectic skill, discusses this question. We cannot do more than enumerate his main conclusions:—(1.) That those cases of paralysis of the orbital nerves, and of amaurosis which have been regarded as reflex, and following affections of the fifth nerve, are either due to an extension of neuritis from nerve to nerve, or are coincident affections of different nerves; (2.) He cannot admit spasm of the bloodvessels of the cord as the cause of paraplegia in urinary disease; (3.) That if reflex paralysis occurs it is a paralysis by inhibition; (4.) That this theory is unnecessary, as the cases belong to forms of neuritis or myelitis; (5.) That the three conditions of peripheral irritation which give rise to paraplegia are—diseases of the urinary organs, dysentery, and certain uterine affections; (6.) These give rise to paraplegia—(*a.*) By an ascending neuritis which sets up a myelitis; (*b.*) By extension of inflammation to the cord along the veins from the primary source of disease; (*c.*) By the occurrence of a descending neuritis starting in the sacral plexus, and extending downwards along the sciatic nerves.—*The Dublin Journal of Med. Science*, September 1884.

PRIMARY SCLEROSIS OF THE COLUMNS OF GOLL.—The patient, whose case Camuset reports, was 48 years of age. After exposure to severe cold he was seized with feebleness of the limbs and difficulty in walking. Certain psychical disturbances appeared simultaneously. There was nothing abnormal to note in the sensory apparatus. The pupils were equal and contracted normally to light, and sight was good. The upper limbs were completely under the will, and did not tremble on voluntary movement. Speech was clear, and the general health good. There were no lightening pains or gastric crises. Progression was slow and toilsome, the feet being with difficulty raised from the ground, but the gait was not that of ataxia. Sensibility appeared to be intact. The upright posture was with difficulty maintained, and the patient leaned on a stick. He had difficulty in preserving his equilibrium, but this was not increased by closing the eyes. His condition remained permanent for about a year, when in an attack of acute mania he died. There was evidence of a degree of chronic meningitis such as is commonly found in the brains of lunatics. The microscope showed sclerosis of the most internal part of the posterior columns, known as Goll's columns. In the cervical and dorsal regions the lesion was confined strictly to these tracts, but in the lumbar region it had invaded adjoining parts.—*Le Progrès Méd.*, 6th December 1884.

ATAXY FOLLOWING DIPHTHERIA.—Berwald adds another to the very few cases recorded in which ataxy has been a sequel of diphtheria. After the diphtheritic attack, the patient had weakness of the legs with staggering gait and inability to stand with the eyes closed. He suffered from darting pains in the arms and legs, with tightness in the calves of the legs, and numbness of the hands and feet. The patellar reflex was altogether absent, but electric irritability was unaltered, and there was no change in the sensibility when tested in any way. The patient made a complete recovery from the ataxy.—*Berliner klinische Wochenschrift*, 15th December 1884.

PSEUDO-BULBAR PARALYSIS.—Fuller and Browning describe a case in which there was paralysis of the lips, tongue, and jaws, accompanied by an enormous flow of urine containing both albumen and glucose. There was no interference with the mental powers of the patient, and no paralysis of the muscles elsewhere. The patient sunk and died of collapse. At the autopsy two fresh extravasations were found in the brain substance, one being in each lenticular nucleus, and both were about the size of a pigeon's egg. The pons and medulla oblongata were intact.—*The New York Medical Record*, 1st November 1884.

PURULENT PERICARDITIS AND TUBERCULOSIS OF THE MEDIASTINAL GLANDS.—Kast (*Virchow's Archiv*, June 1884) reviews the history of this subject. Baréty found serous effusion in the pericardium in 18 out of 101 cases presenting lesions of these glands. Zahn has published a case of purulent pericarditis from the bursting of a gland abscess into the œsophagus and pericardium. Others have written on this subject, and recorded cases of a like character. Weigert considers that infection of the serous membranes proceeds always from neighbouring organs, and that in tubercular pericarditis, apparently idiopathic, the source of infection may lie in the small glands behind the sternum which are often overlooked. Kast's own case is of great interest. In it there was evidence of a mediastinal growth,—dulness over the upper and central part of the thorax, cyanosis, dyspnœa, distension of the jugulars, and œdema of the lower limbs. There was also distinct evidence of pericardial effusion, judged of by the increase of dulness towards the left, slight fulness of the precordia, the small pulse, the absence of cardiac impulse, and of the cardiac sounds save at the base when the breath was held. The pericardium was aspirated, and a quantity of pus removed with temporary benefit. The patient ultimately died. The pericardial sac was found to communicate by a ragged opening with the cavity of a softened lymphatic gland. There were some tubercular nodules in the lungs.—*Archives Gén. de Méd.*, November 1884.

TRACHEAL ULCERATION AFTER TRACHEOTOMY.—Several cases of this description are recorded as having occurred in the Hôpital Trousseau. It was found in 6 out of 33 autopsies, and was believed to be produced by the tracheotomy tube. The probable influence of this on the deplorably high death-rate after tracheotomy for diphtheritic croup is not discussed, and we should be glad to hear more on the subject.—*Le Progrès Méd.*, 29th November 1884.

CIRRHOSIS OF THE PANCREAS.—Professor Earle of Chicago contributes a paper on this subject based on four cases which he met with in practice. He reviews the somewhat meagre literature on the subject, and deplores the fact that the condition of the gland is so seldom investigated in the post-mortem room. His conclusions are—(1.) That inflammations of this organ are more frequent than is supposed; (2.) That by the morbid process the connective tissue is increased while the glandular structure is compressed and in part obliterated; (3.) That the condition is characterized by emaciation, extreme whiteness of the tissues, and generally pain in the region of the organ. The appetite may continue excellent; the pulse and temperature remain normal. There may be passage of fat from the bowel or its eructation from the stomach. No other lesion was found, and the author asks if some of the cases diagnosed as pernicious anæmia, etc., may not be of this nature? He fully recognises the unsatisfactory nature of the clinical symptoms as a means of diagnosis, but thinks the matter worthy of further investigation.—*New York Medical Record*, 8th Nov. 1884.

PERISCOPE OF STATE MEDICINE.

By JAMES ALLAN GRAY, M.A., M.D. Edin., F.R.C.P.E.

POISONING FROM SALMON IN A BULGED TIN.—Two fatal cases of poisoning by tinned salmon, and a third non-fatal case, occurred lately at Wolverhampton. The salmon was used at supper, and the three persons who ate of it were all seized with abdominal pain, vomiting, coldness of surface, &c. One of them died the next morning, the second lingered for more than two days, and the third, who had eaten but sparingly, recovered. A fourth member of the family, who had just tasted the salmon, thought it bitter, and ate none. The chemical examination of the contents of the nearly empty tin yielded a negative result; but small portions were given to tame mice, and one of these died in five hours, and another in six hours and twenty-five minutes. The bread, tea, and other materials used at the supper were found to be free from poison; and the viscera of the deceased persons failed on analysis to give any evidence of a known recognisable poison. Beyond the bitter taste, the only point specially to be noticed regarding the condition of the salmon was that the tin in which it was contained, instead of having its ends depressed, as is the case when the exhaustion of air is complete and sustained, had them bulged out, as if from internal pressure, caused in this case, no doubt, by decomposition of the fish. It would be well, as the coroner in this case remarked, that the public should know the danger of bulged tins, and only purchase those with the ends depressed, showing properly sustained exhaustion.—*Sanitary Record*, July 1884, p. 21.

POISONING BY CANNED TOMATOES—DANGER OF USING A

Chloride of Zinc Flux.—Under this heading the *Sanitary Record* for August 1884 notes the report of a case by Dr J. G. Johnson, of Brooklyn, in which six persons were affected, some of them seriously, by the ingestion of canned tomatoes. The tomatoes were prepared by being boiled; and two hours after the lunch at which they were served, all who had partaken of them began to complain of burning pain in the pit of the stomach, intense thirst, dryness of the throat, retching, and tenesmus. The symptoms increased in severity, but two of the patients improved after vomiting. One of the others, who had eaten none of the solid parts of the tomatoes, but merely soaked bread in the juice, suffered from gastroenteritis, became comatose, and on the evening of the eighth day had epileptiform convulsions which lasted for two days. Ultimately all recovered. It should be noted, however, that one of the younger members of the party, in addition to suffering severely, had a "fiery red eruption from head to foot, accompanied with intolerable itching." An examination of the whole circumstances of the case was fortunately very easy. The lunch consisted of bread and butter with boiled tomatoes, and all who sat down to it were rendered sick. But the father of the family ate of the same bread and butter at breakfast and supper with impunity. Consequently these were innocuous. Then the fact that the tomatoes had been well boiled before being used effectually disposed of the idea that the poisoning was due to any ferment, and an examination of the cooking vessels showed that these were sound, and that consequently the presence of verdigris in the can would not explain the symptoms. "However, on showing a can similar to that used for the tomatoes to a tinsmith, a flood of light was thrown upon the case. This man pointed out to Dr Johnson that the cap was not fastened to the head of the can by a resin amalgam, as the sides were, but that the amalgam was made of muriate of zinc, *i.e.*, pieces of zinc were placed in muriatic acid and dissolved till the acid would no longer attack the zinc, and this liquid was painted into the groove at the head of the can. The cap was then placed on and held with a clamp, and the soldering iron passed round. Of course the solder held the acid in, and if there happened to be too much acid applied to the groove, then, as the tin expanded with the heat, it would be forced into the can." Dr Johnson cautions purchasers to "reject every article of canned food that does not show the line of resin around the edge of the solder of the cap, the same as is seen on the seams at the side of the can."

Cases of Poisoning by Belladonna and the Daturas.—In the *Gazette hebdomadaire de Bordeaux*, Dr Masse relates the history of a case of accidental poisoning by belladonna leaves. The patient, who had been ailing for several days, took on the morning of the occurrence a dose of castor oil, and then fasted during the remainder of the day. In the evening, wishing a cup of chicory tea, he despatched a messenger to the apothecary's for 15 grammes (about half an ounce) of this substance. By mistake a like quantity of the leaves of belladonna were supplied, and half of this was infused. The patient drank half of the infusion in spite of its disagreeable taste, and three-quarters of an hour later he felt dryness of the throat, which was quickly followed by paralysis of the tongue, derangement of vision, inability to walk, and a feeling of choking. When Dr Masse was called he found the pupils widely dilated, the skin cold and pale, and total inability to swallow. Belladonna poisoning was accordingly diagnosed, and treatment by emetics, external warmth, and the administration of strong coffee pursued. Gradually warmth returned, and perspiration was established; but the mental faculties, which had hitherto been unimpaired, became affected, and the man suffered from frightful hallucinations, etc. Hypodermic injections of hydrochlorate of morphia were given in order to calm the delirium, but not with the intention of acting as an antidote to the atropia. For the morphia, instead of being useful, would, in the opinion of Dr Masse, have been very injurious in the cold stage, at which time it might have induced fatal syncope. Recovery, however, gradually took place, impeded only by a short return of the hallucinations and by the persistence of the mydriasis. Fifteen grammes of belladonna leaves had been supplied, and of these seven had been infused, but only half of the infusion was drunk. According to Dorvault, the amount of extract of belladonna corresponding to 3½ grammes of the leaves is 0·80 grammes, a quantity containing about half a centigramme ($\frac{1}{13}$ grain) of atropine.

In reference to the preceding communication, Professor Pécholier, of Montpellier, writes to the *Bulletin général de thérapeutique* an account of a case which occurred in his practice, where a nurse accidentally administered to a patient an enema containing 6 grammes of extract of belladonna, and where, thanks to energetic treatment by purgative enemata and emeto-cathartics, recovery ensued. M. Pécholier is, even less than Dr Masse, an advocate of morphia as an antidote to belladonna; he considers that the chief fault of the opium preparations in this respect is their delaying the effect of evacuants, the use of which it ought to be above all our first endeavour to evoke.

Nor did M. Pécholier use morphia in a set of cases previously under his care, where a whole family of peasants were poisoned by field spinach, which turned out to be simply some daturas. The delirium here was very intense, the patients roaring like madmen, etc. They were, however, gradually calmed by the use of emetics, enemata, and diluted drinks.—*Revue Médicale*, 16th August 1884, p. 218.

POISONING BY THE FRUIT OF THE TAMINIER.—M. Contagne, of Lyons, had occasion some time ago to investigate an interesting case of poisoning by this plant. Suspicion had fallen on a woman owing to the sudden death of her little girl, twenty-seven months old, and an inquiry was ordered. No marks of violence were to be seen on the body of the child, and no grave lesion of the viscera was found. But in the intestines M. Contagne discovered, mixed up with detritus, some seeds, brown in colour, nearly spherical in shape and rather larger in size than the head of a large pin, and with the seeds some bright red fragments of vegetable matter, evidently part of the envelope of the seeds. Some difficulty was found in detecting the exact plant to which the ingested berries belonged. The fruit of the bryony (the black or the red?) was the only fruit at all analogous to that found in the child's stomach at the autopsy. However, the woman, on having a number of fruits shown her, pointed out those of the taminier as being those she had plucked and eaten, and given to her child. The taminier belongs to the natural order Dioscoreaceæ. It has a large fleshy root, black externally and white within, acrid and sticky, recommended otherwise as a resolvent and diuretic. As to the berries, there is hitherto no instance on record of their having caused any accident. Yet, on inquiry, it was found that free purgation resulted in children from the berries, which are to be plucked in hedges, being eaten in too great quantity. Physiological experiment has confirmed this opinion; the fresh juice of the suspected berries, when injected under the skin of frogs, rabbits, and dogs, has always produced an amount of serious disturbance, irrespective of its local action. Sixty-six seeds were found in the child's intestines (equal to eleven berries), and probably many more had been rejected by vomiting during life. As the child was of tender age—and children are specially susceptible to poisons of this nature—it is in the highest degree probable that death resulted from the berries, though whether given with intent or not, it was impossible to say.—*Revue Médicale*, August 1884, p. 220.

Note.—The taminier, if not *Tamus communis*, the common black bryony of our hedges, must be nearly allied to it, since both the botanical characters and physiological actions correspond very closely with those of that plant. The young shoots of the black bryony, according to Balfour, are occasionally used as asparagus, but they are not safe. The red bryony, *Bryonia dioica*, belongs to the Cucurbitaceæ, and is so named from the colour of its berries, which considerably resemble those of the black bryony. But unlike the latter, whose root is black and leaves heart-shaped and smooth, the root of the red bryony is white, and its leaves rough and shaped like those of the vine—hence its other name of wild vine. In both the roots are acrid and irritating; that of *Bryonia dioica* was formerly in use as a medicine, causing vomiting and purging, and occasioning collapse, which, according to Guy, was sometimes followed by a fatal result. The root of the black bryony was similarly used as a purgative. The berries of both plants are well known in Britain as causing sickness in children.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman, Inverness.

Three Cases of Vaginal Total Extirpation of the Uterus, with two recoveries, including one operation on a Girl aged 13, on account of Sarcoma. Zweifel of Erlangen (*Centbl. f. Gynäk.*, No. 26, 1884).—The writer strongly recommends the careful division and ligature of the broad ligaments, piece by piece, in preference to the use of comprehensive strong ligatures, and also advises against the division of the uterus up the centre in the course of the operation, as adding to the risks of hæmorrhage and trouble in dealing with it. He states also that he has found the usually recommended retroflexion of the uterus in the course of the operation unnecessary, and thinks that it would render the secural of the broad ligament less certain. The ligatures around the upper part of the broad ligament he cuts short, those around the lower he leaves hanging into the vagina, and removes fourteen to twenty days after operation. His first case, aged 35, died of peritonitis on the third day. Post-mortem, there was in addition slightly fatty liver, parenchymatous nephritis, pneumonia, struma, and syphilis. The second case, aged 46, operated on apparently about two years ago, recovered without a single bad symptom, and remained free from return of the disease at the date of writing (June 1883). The third case was that of a girl, aged 13, who had suffered from hæmorrhage from the vagina for three years, and latterly from pain in the side. The hymen was intact, and there was in the place of the cervix a small apple-sized hard rough swelling. This was removed, and on examination proved to be a round-celled sarcoma. Eight months later, the disease was found to have returned. The uterus was normal in size and position, and quite movable. The perinæum was divided, and the further steps of the operation differed only in their greater difficulty from those of a similar procedure on an adult. The disease was found to have extended high up into the cervical canal. Recovery was rapid and good.

Perforation of Intestine caused by a Bimanual Examination. Schwarz, Halle (*Ibid.* 27).—The patient was 46 years old, and had long suffered from a uterine fibroid, which had necessitated frequent curetting and intrauterine treatment. Shortly after an examination, symptoms of severe peritonitis appeared, and the patient died. The writer thought during life that the condition was due to rupture of the uterus and escape of perchloride of mercury solution into the abdominal cavity during the administration of the vaginal douche. On post-mortem examination there was found a partial stricture of the intestine, with dilatation above it, and a hole in its wall. On the fundus uteri there was a mark as though a coil of intestine had been adherent to it; and the writer thinks that this had been the case, and that it had been torn away during his examination, which, however, was gentle, as the uterus was painful to handling. No trace of mercury could be found in the organs.

THE ETIOLOGY OF HÆMATOCELE. Doubousquet-Laborderie (*Thèse de Paris*, 1883).—The writer studies the question of the influence of coitus shortly before, during, or after menstruation on the production of hæmatocele, and comes to the conclusion, from a review of seventeen reported and one original case, that this etiological factor has been hitherto too little considered, especially in the cases of prostitutes and the newly married. In the case observed by himself, he was able to say that there was no previously existing pelvic mischief; but obviously he can draw no definite conclusion from it, as among the seventeen collected cases there are numerous prostitutes, among whom the existence of pelvic disease was probable. He lays especial weight on the anæmia which follows hæmatocele as standing out of proportion to the amount of blood effused into the peritoneal cavity, and regards it as a special affection or disturbance of the hæmatopoietic system, resulting from the peritoneal irritation; and as a principle of treatment in such affections, he insists on the support of the general strength.

THE TREATMENT OF THE UMBILICAL CORD. Credé and Weber, Leipzig (*Archiv. f. Gynäk.*, xxiii. 1).—The writers set themselves to answer the questions, How is bleeding from the divided cord to be obviated? and, How is inflammation—and its results—of the fœtal portion to be prevented? In the first place, they state that they are dissatisfied with the ordinary methods of securing by tape or linen; but both from clinical experience and as a result of experiments made on cords post-partum, they recommend strongly the use of elastic ligatures as suggested by Budin, and as used by them in Leipzig for the past eighteen months with perfectly satisfactory results. The ligature used is 2 mm. thick, and is tightly wrapped round the cord, tied, and again taken half round and retied. As by this means the operator can be perfectly certain that there will be no bleeding, the point ligatured should be close to the skin on the cord, as according to the writers the shorter the portion left attached to the child the less chance is there of traumatic inflammation. The after treatment simply consists in keeping dry wadding round the stump, and carefully drying after the child has been bathed. Since the above treatment has been followed in the Leipzig Maternity, there have been no cases of umbilical disease.

THE DIAPHORETIC TREATMENT OF PUERPERAL ECLAMPSIA BY MEANS OF HOT BATHS. Breus (*Archiv f. Gynäk.*, xxi. 1).—In a previous number of the above journal, Breus reported six cases of eclampsia treated by hot baths, with the result of five recoveries and one death. In the present paper eleven additional cases are reported, with similar mortality. The treatment consists in placing the patient in a bath (38° C.), raising the temperature gradually, then wrapping her in blankets, thus securing profuse diaphoresis. Of these eleven cases, four had convulsions at the beginning of labour, two during the first stage, one during delivery, and four after. In the majority of cases the eclamptic seizures were severe. In the fatal case the issue was most probably dependent on peritonitis, possibly septic, than on the convulsions. The two series together, then, afford a total of seventeen cases, with but two deaths—one of these latter not from convulsions. In eclamptic seizures the danger to life depends only indirectly on the convulsions. The main danger lies in the altered characteristic of the blood—hydræmia—and the consequent albuminuria and anasarca. These accompaniments of Bright's can obviously best be met by profuse diaphoresis, a treatment which, while it can have but little effect towards curing the kidney trouble, undoubtedly relieves the symptoms which are threatening the life of the sufferer. From the use of this hot-bath treatment the writer has seen nothing but good effects. It is not apt to cause either abortion, or premature labour, or hæmorrhage. On the contrary, he would advise the use of hot baths at any time of pregnancy when the appearance of albumen in the urine and coexisting œdema causes apprehension of ill; indeed, they are indicated as a prophylactic measure. A striking case is recorded, where a patient, æt. 26, in her first pregnancy, highly dropsical, with a large percentage of albumen in the urine, was subjected to the hot bath treatment at the eighth month, went to term, was delivered of a child weighing 2700 gm., receiving during this interval forty-five baths with positive good effects, both as concerned her own condition, the continuation of the pregnancy, and the safety of the child. The general conclusion to be drawn from this paper is, then, that we have in this treatment the best possible method for cases of the kind. It answers when eclampsia exists, and also in those cases where the occurrence of the eclampsia may be apprehended.

MURIATE OF COCAINE IN GYNÆCOLOGY. W. M. Polk (*Med. Record*, 1st Nov. 1884).—The writer says:—As a matter of some interest just at this time, I give the results obtained with hydrochlorate of cocaine in two cases of trachelorrhaphy done this afternoon (29th October 1884).

CASE I. *Double Laceration of the Cervix Uteri, extending on both Sides to Cervico-Vaginal Junction.*—The vagina was first washed with a warm-water douche, then the cervix, the patulous cervical canal, and the vaginal walls adjoining the cervix were carefully washed with Castile soap; this in turn was washed off, and the surface carefully dried. Next a 4 per cent. solution was painted over the cervix, in the canal, and over the adjacent vaginal

wall with a camel's-hair brush. This was repeated twice, at intervals of two or three minutes, making three applications of the drug. Within three minutes of the last application the operation was begun. It required the removal of extensive pieces of cicatricial tissue from each angle, making it an elaborate operation of its kind. The time consumed was about forty minutes; the patient made no complaint and suffered no pain till the last ten minutes of the procedure, then she spoke of her discomfort as being a sense of soreness rather than acute pain. Thinking that the case might be one of those in which the normal sensitiveness of the region was not great, consequently one that might have borne the operation without the use of any anæsthetic, local or general, I chose a second.

Case II.—The woman was one having less self-control than the first, and with a good deal of normal sensitiveness about the uterus and vagina. The preparation of the region and the application of the anæsthetic were the same as in Case I. No pain was felt till the lapse of about twenty minutes, then it was so acute as to require an application of the solution of cocaine, making in her the fourth. In three minutes the operation was continued, and soon completed without further pain. The last application was made directly to the cut surfaces, first freeing them from blood. The patient, who three years ago had had the same operation performed under ether, was asked which method she preferred, that with ether or this last without; she promptly replied, this last. In the first case the effect of the drug seemed to be, that it not only blunted sensibility, but it appeared to retard the first appearance of blood upon the cut surface. These cases I offer as a contribution to the solution of the question now so prominently before the profession—the place to be held by hydrochlorate of cocaine as a local anæsthetic. With a view of testing its value in obstetric practice, a series of observations are being made in the Emergency Hospital, the solution being applied to the cervix and upper part of the vagina during the severe pains of the first stage of labour. The result I beg leave to communicate to you, when the number of cases is large enough to make the report valuable.

PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

On Cases of Retro-Ocular Neuritis.—A paper by Nettleship on this subject forms the most important contribution to vol. iv. of the *British Ophthalmological Society's Transactions*. These are cases in which some part of the optic nerve is the centre of inflammation. The symptoms to which this rather rare form of disease gives rise are thus summarized by Nettleship: "Failure of sight limited to one eye, often accompanied by neuralgic pain about the temple and orbit, and by pain in moving the eye; many recover, but permanent damage, and even total blindness, may ensue; there is at first little—sometimes no—ophthalmoscopic change, but the disc often becomes more or less atrophic in a few weeks, and occasionally there are slight retinal changes." Of 25 cases observed and treated by the author, 14 recovered sight completely, 6 became totally blind, and the inflammation left a permanent defect of vision in the remaining 5. In one case, that of a young man, aged 23, both eyes were affected, producing a marked degree of blindness (V. $= \frac{8}{200}$), which was completely recovered from in less than three weeks. The pain is very variable in amount; often only complained of as a "stiffness" felt when the eye is moved; it generally begins a little before the visual symptoms, and soon disappears altogether. The patient is first conscious of his defect of vision from seeing objects mistily, and often brownish or yellowish in colour. There is considerable variety in the nature of the alterations which take place in the field of vision, though a central defect is that most frequently met with. The ophthalmoscopic changes are also very variable in extent, and do not appear to stand in any definite relation to the amount of pain experienced. Nettleship remarks that "these variations in the state of the field and of the fundus show that the morbid process does not always begin at the same distance from the eyeball, and does not always affect the same strands of nerve-fibres." He suggests that cases in which the pain is severe, and the sight lost or greatly impaired, whilst the ophthalmoscopic changes are long in making their appearance, may be due to periostitis of the optic canal. The cause of these inflammations of the optic nerve is not very definite, the most likely origin being rheumatic.

Statistics of the Result of Extraction for Cataract.—At p. 117 of the same vol., Higgens gives the result of 200 extractions. Two methods of operating were employed:—1. A small flap section, with iridectomy. 2. An oblique corneal section. The section by the first method was made upwards, except when there was likely to be a difficulty in making it properly, or the patient was not anæsthetized when it was made downwards. The results are classified under the headings,—Successful (V. $\frac{20}{20}$ to $\frac{20}{200}$), of which there were 175 (87·5 per cent.); partially successful (V. $< \frac{20}{200}$ to counting fingers close to the eye), which embraced 9 cases (4·5 per cent.); and failures (no improvement or worse than before the operation) 16 cases (8 per cent.) A secondary operation was performed in 38 cases (19 per cent.)

A Proposed Precaution before Extracting Cataract where there is Lacrymal Obstruction.—It is well known that there is a great risk of inoculation of the corneal wound resulting in more or less purulent destruction of the eye in cases where there has been lacrymation from catarrh of the lacrymal passages. In order to obviate this risk Streatfield proposes complete obliteration of the sac and canaliculi by means of the thermo-cautery (*Trans. Ophth. Soc.*, vol. iv. p. 188). This seems rather an extreme measure, especially if, as some declare to be the case, the inoculation can be prevented by applying iodoform to the fresh wound.

ON THE NATURE OF SYMPATHETIC OPHTHALMIA.—Deutschmann, in an elaborate paper in the last number of Graefe's *Archiv* (vol. iii. p. 3), gives, as the result of experiment and observation during the last two years, a large amount of very strong evidence in favour of the view held by Leber and others, that the transference of destructive inflammation from one eye to the other takes place along the optic nerves. The first series of experiments consisted in injecting into the vitreous chamber of the eye of a rabbit two drops of a fluid containing nothing but the spores of staphylococcus pyogenes aureus, obtained by suitable processes from purulent masses taken from different parts of the body. The next day symptoms of irritation showed themselves in the eye into which the fluid was injected; and on the second day there were marked hyperæmia of the disc of the other eye and symptoms of meningitis. On the third day the animal died, and on microscopic examination a purulent infiltration of the optic nerve of the eye, into which the inoculating fluid was introduced, could be traced up the chiasma, and from thence down the nerve of the opposite side to the papilla, while the pia mater of the base of the brain was also found to be inflamed. In all the situations involved in the infiltration micro-organisms, the same as those injected, could be found in abundance. The drawback in these first experiments was the early death of the animal experimented on. The fluid injected was in subsequent experiments very much diluted, which had the effect of delaying the occurrence of death, although the animal was always lost from five days to two or three weeks after the inoculation. In all the cases the second eye exhibited a sympathetic inflammation of the bulbar end of the optic nerve, with opacity of the retina in the neighbourhood; the vitreous, however, remained clear, and the iris, though sluggish and dilating irregularly, showed no attachments to the capsule. There were no symptoms of meningitis, or any, even microscopic, indications of the spread of the inflammation to the membranes to account for the constant occurrence of death sooner or later, the cause for which it was thought must be septicæmia, a suspicion which was confirmed by the fact that after death it was always possible to grow the staphylococcus from the blood (removed with due precautions); and further, that when thus obtained, it proved quite as efficacious in producing changes in the eye similar in every way to those resulting from the original injection. These experiments, though they demonstrated the propagation of inflammation and the direct passage of micro-organisms, never induced a definite iritis, probably, it was thought, because the animal died before the inflammatory action reached the more anterior portions of the eye. Why, again, did the organisms which constantly produced a destructive inflammation of the first eye, although they could be demonstrated to have passed into the second, be productive of such comparatively small mischief in it? To determine whether this was due also to the early death of the animal before the organisms had developed in sufficient quantity, Deutschmann made a series of experiments, in which he cut the optic nerve far back in the orbit, and injected the inoculating fluid into its distal end after having ligatured the central end. The optic papilla, which became considerably blanched immediately after this operation, regained its normal appearance in a few hours. Next day there was marked hyperæmia and swelling of the papilla, followed in the course of time by infiltration of the vitreous and discoloration of the iris, and four days after the inoculation deposits on the posterior wall of the cornea. When this step was reached the eye was removed and examined, and the animal lived. The microscopic examination revealed the presence of the cocci in all parts of the eye. It had been found that meningitis only occurred if the inflammation in the first eye was extremely intense, as when produced by the injection of a strongly saturated fluid, otherwise the micro-organisms were carried or passed up the one nerve to the chiasma, and from there down the nerve of the other side without passing to the membranes of the base of the brain. This fact is explained by the direction of the lymph current in the nerve, which is from the centre towards the eye. This was demonstrated by injecting into the sheath of the optic nerve, with the point of the syringe directed away from the eye, a few drops of fluid containing particles of Indian ink; and examining the nerve microscopically after four days, when it was found that no more had passed upwards. This could be accounted for by the process of injection, where the whole course of the sheath below, and even in some places the nerve itself, was occupied by the black particles. Deutschmann concludes, therefore, that what takes place in his experimental sympathetic ophthalmia is, that the micro-organisms as they grow in the first eye creep up the corresponding nerve until they reach the base of the brain, from whence they are carried by the lymph current down the opposite nerve, in that way reaching the other eye. He next made a microscopic examination of all the eyes at his disposal, which had been removed on account of a sympathetic inflammation of the other eye, making use of the new methods of staining for the detection of micro-organisms. All preparations about which there was a suspicion of bad preservation were excluded from this series. In all the eyes examined, with one exception, he found distinct micro-organisms, and these, too, were always to be found in the nerve. In four fresh cases the eye on removal was soaked with boiled distilled water, then opened and a small amount of pus, in the vitreous or elsewhere, put into blood serum, and treated according to Koch's method for the cultivation of micro-organisms. Kept at a temperature of from 36°–38° C., the first appearance of development showed itself in the shape of discrete, small, white, round patches, which rapidly increased in size and became confluent, forming a white, oily, glistening mass. The micro-organism thus obtained is identical with Rosenbach's staphylococcus pyogenes albus, and only differs in colour from that used in the previously described experiments on rabbits. When introduced into the vitreous of living rabbits it produced a train of symptoms exactly similar to those brought about before; preparations also obtained from the blood of the animals (which as before were always found to die eventually of septicæmia) were found to be not less virulent in their action than the original preparations. One of the human eyes from which these cocci were obtained, and gave rise to sympathetic ophthalmia in the animal experimented on, was removed from the patient before any affection of the other eye had taken place, although there had been a possibility of sympathetic inflammation existing for four years. This fact is interesting, showing how long the micro-organisms may retain their dangerous properties,—the fact of these remaining dormant so long being probably due to the mass of pus from which they were taken being more or less encapsuled in the eye. Deutschmann next found that a portion of iris removed from the sympathetically inflamed eye of a patient furnished him with the same cocci, and that these produced as before typical experimental sympathetic ophthalmia in rabbits. The results of his investigations led him to the conclusion which he expresses as follows:—"I have been led by all the facts brought forward to form the opinion that in all probability the sympathetic ophthalmia met with in man is an inflammation spreading from the first to the second eye along the optic nerve; that the exciting cause is either a micro-organism, which in some manner has been introduced into the eye, or perhaps, though rarely, a chemical irritant as well."

OBITUARY.

SIR ALEXANDER GRANT, Bart., D.C.L., LL.D.

The death, on 30th November, of so prominent a citizen as Sir Alexander Grant, who, during his sixteen years' tenure of office as Principal of the University of Edinburgh, had so close a relation to the Medical School in this city, is an event which ought not to be allowed to pass unnoticed in this Journal.

We do not, however, intend to dilate here on his position as a scholar and man of letters, of his successful administration of the affairs of the University during his Principalship, of his authority as an educationalist, or of his personal gifts as a refined and courteous gentleman; but in his capacity as Convener of the Executive Committee for carrying out the New Buildings for the Medical School of the University he has taken a most important part in the promotion and improvement of medical education, and has imparted a stimulus to medical teaching and research which ought to be held in lasting remembrance.

Having been impressed, soon after his appointment as Principal, with the insufficiency of the then University Buildings to accommodate the increase in the professoriate and the growing number of students, and the impossibility of adapting them to the changes which had taken place in the methods of scientific and medical study, Sir Alexander Grant inaugurated, ten years ago, the movement which has resulted in the magnificent New Medical School in Teviot Row. To obtain the funds necessary for carrying out so great a work was no ordinary task, but Sir Alexander applied himself to the object he had in view with devotion and steadfastness of purpose. The bequest of £20,000 by the late Sir David Baxter, Bart., who in so many other ways was a liberal benefactor to the University, formed the starting point for the scheme; and at a public meeting held in April 1874, which was presided over by the Lord Provost, it was announced that £59,000 had been subscribed for the purpose. It required more than three years' hard work to raise the subscription list to £100,000; and then the Government of the day, through Sir Stafford Northcote, the Chancellor of the Exchequer, gave a parliamentary grant of £80,000.

The educational buildings, from the designs of Mr R. Rowand Anderson, LL.D., were then commenced, and progressed so satisfactorily that, on the occasion of the Tercentenary festival of the University held in April last, they were formally opened at a luncheon presided over by the Principal, and given in the hall of the New Museum. But the need of more money for the payment of the numerous and often costly fittings required for the completion of the laboratories and museums of the new school was ever present to the mind of Sir Alexander Grant. During the last week of his life he was busily engaged in endeavouring to raise a fund of £10,000, which, along with £5000 promised by a generous donor, Mr Wm. M'Ewan, would suffice to pay off the balance of the obligations which have been incurred, but death then intervened and put a stop to his labours.

The necessity of building a University Hall, in which examinations, graduations, and other academic ceremonies were to be conducted, was always kept before the public by the Principal as a necessary part of his building scheme. The task of carrying this out must, however, now be left to his successor. But the noble pile of educational buildings on the east side of the Meadow Walk will form an enduring monument to the energy, public spirit, and devotion to the University which have been displayed by Principal Sir Alexander Grant.

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Part First.

ORIGINAL COMMUNICATIONS.

I.—ON SOME INJURIES IMPLICATING THE ELBOW-JOINT.

By THOMAS ANNANDALE, Regius Professor of Clinical Surgery in the University of Edinburgh.

(*Read before the Medico-Chirurgical Society of Edinburgh, 7th January* 1885.)

HAVING had an opportunity of dissecting and studying several illustrative specimens of some of the rarer forms of injury involving the bones connected with the elbow-joint, I desire to give a description of them, with the hope that my observations may possibly add to our knowledge of the pathology and treatment of these injuries.

The specimens which I propose to describe are twelve in number. Nine of them are from my own collection, and eight of them have been obtained by the operation of excision, the operation being performed to relieve anchylosis or deformity, the result of an injury to the joint. In all these eight cases the injury had been "simple" in its nature. Two others belonged to the collection of the late Professor Spence; and I am indebted to my colleague Professor Chiene for an opportunity of examining and describing them. One I obtained from the University dissecting-room, and the last one is preserved in the Anatomical Museum of the University.

It may be here noted that in addition to displacements or fractures, or both, of the bones as the immediate result of the injury, all these specimens illustrate other and secondary changes, which are surgically important in connexion with diagnosis and treatment. These secondary changes may be enumerated as ossifications, atrophies, and adhesions, fibrous or osseous.

For convenience I propose to divide these cases into three groups.

I. FRACTURE OF CORONOID PROCESS.

CASE I.—A boy, about 12 years of age, injured his elbow by a fall, the result being a stiff joint and useless arm. The joint was excised, and the dissection of the parts removed showed a dislocation of both bones of the forearm backwards. The tip of the coronoid process was broken off, drawn inwards and upwards, and attached by fibrous adhesions to the posterior aspect of the internal condyle of the humerus. The head of the radius had formed a shallow groove on the posterior part of the external condyle, and rested upon this point to which it was attached by some fibrous adhesions and a small quantity of osseous matter.

CASE II.—A boy, about 18 years of age, injured his elbow by a fall, with a similar result as in the former case. Excision of the elbow-joint afforded an opportunity for an examination of the parts, which presented the following appearances:—Both bones of the forearm were dislocated backwards, and the coronoid process had been fractured through its base. A large quantity of osseous material had been developed in the region of the fracture, and by means of it this process was united to the ulnar and also to the posterior aspect of the condyles of the humerus, close to the olecranon fossa.

CASE III.—An adult, suffering from anchylosis and deformity of his elbow, the result of an injury, had his elbow-joint excised. In this case there was partial dislocation outwards of the bones of the forearm. The tip of the olecranon rested on and was attached by osseous union to the outer margin of the olecranon fossa; the head of the radius projected external to the external condyle, its ulnar margin resting on the outer edge of the condyle. The coronoid process had been separated, and it was united to the ulna and condyles of the humerus by means of a considerable amount of osseous material.

In these three cases the fracture of the coronoid process is associated with other injuries. The first two cases are, I think, illustrative examples of a fracture of this process occurring in connexion with a dislocation backwards of both bones of the forearm.

It is generally acknowledged by surgeons that fracture of this process is rare, but there is still a difference of opinion as to its frequency, and also as to the frequency with which it is associated with backward dislocation of the ulna. Spence says, "I have never seen a case of that dislocation in which the coronoid process was broken." Hamilton only gives one well-authenticated example of this accident with backward dislocation. Malgaigne thinks this fracture more common than is usually supposed. Ferguson writes that in dislocations of the bones of the forearm backwards the coronoid process will "probably" be broken. Hulke records a case in which both coronoid processes were fractured with dislocation backwards of the bones of both forearms. Sayre reports a case of this dislocation, in which the coronoid process was separated and was adherent to the anterior aspect of the condyles of the humerus. Holmes refers to a similar case in which both coronoid processes were fractured and adherent to the humerus.

From the fact that two cases of this fracture with dislocation backwards of the bones of the forearm have been verified by dissection from cases occurring in my own practice in the course of a few years, I am inclined to express the opinion advanced by Malgaigne that the accident as a complication of this dislocation is not so uncommon as has usually been supposed.

It is also probable that this fracture may not always be recognised in cases of dislocation, and as a dislocated elbow-joint is, after the reduction of the bones, usually kept in the flexed position for some time, the coronoid process when fractured will also be kept in position, and so be likely to unite.

The third case illustrates a lateral dislocation of the bones of the forearm with fracture of the coronoid process, and it is an injury which I am not aware has been previously described.

Uncomplicated fracture of the coronoid is probably the rarest form of fracture of this process. Packard, in Ashhurst's *Encyclopædia of Surgery*, divides fractures of the coronoid into—(1.) Those in which the tip only is broken off; (2.) Those in which the whole process is separated; and he also refers to those complicated by fracture of neighbouring bones. The first of these is, I should think, always associated with dislocation of the ulna backwards, or with other injuries, and the second may also be associated with this dislocation or other injury, or may occasionally be the result of muscular action alone.

II. FRACTURES OF THE HEAD OR NECK OF THE RADIUS UNCOMPLICATED.

CASE IV.—A man, æt. 48, was recently admitted into my wards with the following history:—Three months before admission he was lifting stones by means of a shovel, and received a severe jerk to his right elbow by striking the wrist of the corresponding arm against his knee. The accident caused pain over the head of the radius, and considerable swelling of the joint soon followed. The patient did not apply for medical advice, thinking that he had simply sprained the joint. Six weeks after he attended the out-patient department, when a fracture of the upper end of the radius was diagnosed, as there was distinct crepitation and mobility felt in this situation, and the head of the bone rotated only to a slight degree when pronation and supination of the forearm were practised. The olecranon was displaced slightly inwards, and rested upon the inner margin of the olecranon fossa, and the forearm was in the position of semi-pronation. Flexion and extension of the joint were not quite complete, and perfect pronation and supination could not be performed. An attempt was made to place the joint in the semi-flexed position with the forearm in the extreme supine state, but the latter could not be perfectly accomplished. A splint was applied to retain the limb as nearly as possible in this state, and after two weeks of this treatment it was found possible to thoroughly supinate the arm, and accordingly it was secured in this position by means of a splint. At the end of a month no union had taken place, and I accordingly cut down upon the head of the radius with antiseptic precautions, and then I found that the head of the bone was lying loose, having been separated entirely through the neck. There was no attempt at union, and atrophy of the neck had taken place to a considerable extent. Having removed the separated head, the wound was closed and the arm placed in the supine position, with the elbow semi-flexed. I could detect no other injury except the displacement of the ulna already referred to. After the operation the movements of the joint were improved, but the patient still remains under observation, the wound not yet having healed.

CASE V.—A young woman fell and injured her elbow nine months previous to being seen. The elbow-joint was, on examination, found to be firmly anchylosed in the extended position. Excision of the joint was performed, and the removed parts illustrated an oblique fracture through the head of the radius, which separated the articular surface of the bone to the depth of about a quarter of an inch into two halves; the anterior half remained in position attached to the neck of the bone; the posterior half was displaced upwards and backwards, and was attached by firm fibrous adhesions to the posterior surface of the outer condyle of the humerus.

CASE VI.—From the late Professor Spence's collection. The right arm of an adult with the elbow-joint laid open, and showing an oblique split through the articular surface of the head of the radius. This split completely separates the articular surface to the depth of a quarter of an inch into two halves, one-half remaining attached to the neck. There is only very slight separation of the fragments. The accident was of recent origin, and no secondary changes could be observed.

CASE VII.—This is also from the same collection. It was the elbow of an adult, with an exactly similar injury, but it is of old standing, and the fragments are united by fibrous adhesions.

Case IV. must be considered as one of great interest and rarity, and one which has been verified by opening the joint. It is acknowledged by all surgeons that uncomplicated fracture of the neck of the radius is of extreme rarity, and, in fact, some are of opinion that it cannot occur. Hamilton says that such an injury is "extremely rare." Spence writes, "The highest fracture of the radius is that which occurs a little below the insertion of the biceps." Holmes states, "Fracture of the upper part (head or neck) of the radius is another of the proved complications of dislocation, and is believed by some authors to occur independently, but without anatomical proof." Packard remarks in regard to fracture of the neck of the radius, "But no instance is known to me in which it has been ascertained to be broken by itself."

Further, this case is interesting from the fact that the injury

was not caused by any direct force, and it also illustrates the non-union and atrophy of the neck of the radius.

Cases V., VI., and VII. are all well-marked examples of oblique or longitudinal fractures through the head of the radius uncomplicated by other injury, and they must also be classed as rare specimens. No mention is made of the last two in Spence's valuable work on surgery, but the condition seen in Case VII. shows that fair union is possible after such an injury, provided no great displacement of the fragments takes place.

Cases of fracture through the head of the radius, complicated with other injuries, have been recorded by Malgaigne, Bryant, Stimson, Packard, Hamilton, Adam, Hulke, and others. In several of these cases the coronoid process was broken, and in some dislocation had also occurred. Dr P. H. Watson showed to this Society some years ago a very interesting example of fracture, involving the upper end of the radius, in both arms, the result of direct violence.

III. COMPLICATED FRACTURES AND DISPLACEMENTS.

CASE VIII.—An adult had excision of the elbow performed on account of anchylosis and deformity, the result of an injury. In this case there was a fracture through the base of the olecranon, entirely separating it from the shaft of the ulna. This process remained in position in the olecranon fossa, its base, where fractured, being rounded off by absorption. The upper end of the shaft of the ulna, which had also lost its sharp edge by absorption, and the head of the radius, were displaced forwards, and firmly attached by fibrous bands and osseous material to the anterior aspect of the humerus immediately above the condyles.

CASE IX.—An adult. Elbow-joint excised on account of deformity and anchylosis following an injury. The parts removed show a transverse fracture through the lower end of the humerus, a little above the condyles, with displacement downwards and forwards of the lower end of the upper fragment. This fragment is firmly united by osseous material to the anterior aspect of the radius and ulna, and to the anterior aspect of the lower fragment and condyles of the humerus. The olecranon is displaced downwards, and has formed a new articular surface for itself immediately below the olecranon fossa. The head of the radius is in its normal position as regards the ulna, but it articulates with the anterior edge of the external condyle.

CASE X.—A boy, about 6 years old, injured his elbow by a fall, and this was followed by anchylosis, making the arm very useless. Excision of the joint was performed, and an examination of the parts excised disclosed an oblique fracture through the condyles of the humerus, completely separating the outer half of the epiphysis, together with the external condyle. This portion of bone was displaced upwards and backwards, and also slightly rotated outwards, and was attached by osseous material to the posterior aspect of the humerus immediately above the articular surface. The olecranon fossa was filled up by osseous material, and the olecranon itself was displaced slightly backwards from its normal position by this new material. The posterior margin of the head of the radius was displaced a little upwards and forwards, its posterior margin resting against the epiphyseal line from which the external condyle had been separated.

CASE XI.—An adult. Preparation obtained from the dissecting-room. The olecranon is displaced upwards and backwards. The head of the radius is also displaced upwards and backwards, and has pushed before it a portion of the outer condyle, which has been broken off. This separated condyle is firmly adherent to the posterior aspect of the humerus, immediately above its normal position. The coronoid process has apparently also been broken off near its base, and is drawn upwards and attached by osseous material to the anterior aspect of the humerus.

CASE XII.—From the University Anatomical Museum. The elbow-joint of an adult anchylosed by osseous material in the semi-flexed position, shows an oblique fracture through the condyles of the humerus separating the external one. This separated condyle is displaced downwards and forwards, and is anchylosed to the ulna. There is also a fracture through the upper end of the radius which is firmly united, and this bone is also united by osseous material to the anterior aspect of the ulna. The radius and ulna have been fractured through their middle thirds, but are firmly united. The forearm is fixed in the semi-prone position.

Cases VIII., IX., and X., although complicated as regards the injury to the bones, were not attended with external wounds of the soft parts, and they well illustrate that the bones forming the elbow-joint may be broken or displaced in various ways without the accident being "compound" in its nature. In regard to Cases XI. and XII. there is no history as to whether or not the injuries were "simple" in their character.

The cases and preparations which have been described in this paper cannot be used with much success in assisting our diagnosis of recent injuries, because they are all examples of old-standing accidents, and the parts have undergone alterations, owing to displacements, adhesions, growths of new bone or atrophy of bone, or of several of these combined; but I would suggest three points for consideration in connexion with them.

(1.) That injuries to the bones of the elbow-joint may be complicated, making their exact diagnosis difficult when there is no external wound communicating with them, and their treatment, even with care, not always satisfactory as regards the after mobility and usefulness of the joint.

It is well known how generally injuries to the elbow-joint are followed by considerable swelling, which adds to the difficulty of correct diagnosis, unless the case is seen before the swelling takes place, and it is therefore a wise precaution to give a guarded prognosis as to the probable future condition of the joint. Some of the cases described clearly show that even with careful and recognised treatment a perfect result can scarcely be expected after certain complicated injuries.

(2.) That the secondary changes which take place after some injuries to the elbow-joint further complicate the case, add to the unsatisfactory result, and make ordinary treatment insufficient.

Perhaps the most important change—and it is well illustrated in many of the specimens—is the development of osseous structure which not only unites the bones or separated portions of bones together, but also mechanically interferes with the movements of the joint. The rapidity with which this change takes place after injury is more rapid than I think is usually supposed, and more particularly in the case of young people, and I have seen cases in which, within a very few weeks after the injury, osseous material was largely developed.

Atrophy of bone, and absorption by the pressure of one displaced bone working upon another, are also well illustrated in some of these preparations; and it is not difficult to understand why atrophy and complete non-union should occur when the head of the radius is entirely separated, as in the case related. Adhesions of osseous material or of firm fibrous structure must always act in increasing the stiffness of the joint, and such changes can rarely be removed without operative interference.

(3.) It having been proved that the complicated nature of some cases of injury to the bones of the elbow, together with the secondary changes which follow them, results in a stiff or deformed joint and more or less useless arm, it is natural to ask, Can any other than the ordinary and recognised treatment be employed which will give a better result? I answer this question by suggesting that, with the aid of careful antiseptic treatment primary operative interference should be more frequently employed than it has hitherto been in certain of these cases. This second question arises out of the first. In what cases should you interfere by primary operation? My reply is, that in any doubtful case as regards exact diagnosis, I would advise that the patient be put under the influence of chloroform or other anæsthetic, that an attempt be made to replace any bones fractured or dislocated, and if this is successful, it should then be tested if these bones remain reduced when the arm is placed in proper position, and simple pads and a bandage or a splint applied. If the bones can be so retained, I would not suggest any operative interference, but would retain the appliance for about two weeks, re-adjusting it from time to time, if necessary. At the end of two weeks careful movements should be employed once every two or three days, with the view of preventing adhesions, but some appliance should be continued, except when these movements are being practised, for other three weeks. It is specially important to practise these movements early in young patients. Should the surgeon not succeed in replacing the bones, or should they not be retained by position and appliance after being replaced, I would then advocate opening into the joint with antiseptic precautions, and either removing or wiring together, according to the nature of the case, displaced or separated bones. I believe that if this were done, a more rapid recovery and a better result would ensue, than if the case was left and time allowed for the secondary changes to take place, and many who practise operative surgery have experienced excellent results after partial primary excisions of the elbow, provided no serious inflammation and suppuration of the joint take place.

In regard to secondary operations for these injuries, an excision of the joint will, in the majority of cases, be required when the condition of the articulation seriously interferes with the usefulness of the arm, and further mobility or a better position of the limb is desired by the patient. There are, however, cases in which a partial operation may be sufficient, as, for instance, in displacements or fractures connected with the head of the radius, and there are already on record a few of such operations. In fractures involving the olecranon, which are followed by non-union, adhesions, or displacements, a secondary operation may give a good result, as in the following case, which is not the first of its kind, but is interesting from the fact that two wire sutures were employed and allowed permanently to remain, as in the operation for fractured patella, practised by Sir Joseph Lister.

CASE XIII.—A boy, æt. 16, was admitted into my wards upon the 30th of June 1884. About five months before admission he received a kick upon his elbow from a horse. He was seen by his medical attendant, who recognised a fracture of the olecranon, and applied a splint so as to keep the arm and elbow in the extended position. This splint was kept on for several months. When admitted, the elbow was fixed in the straight position, there was an interval of fully half an inch between the two fragments, the upper one being drawn up and fixed by osseous material to the posterior aspect of the humerus immediately above the olecranon fossa. There was only slight movement in the elbow-joint, its surfaces being united by firm fibrous adhesions. Having on the 3rd of July placed the patient under chloroform, I forcibly broke down the fibrous adhesions and flexed the elbow. I then made a free incision over the olecranon and upper end of the ulna, so as to expose the fractured ends, and having first, by means of a chisel, separated the osseous attachment of the upper fragment to the humerus, I sawed a thin slice off each portion so as to raw their surfaces. When the elbow was placed in the semi-flexed position, the two halves of the olecranon were separated fully one inch, and I therefore found it impossible to bring into contact their rawed surfaces. Being anxious to retain the elbow in this flexed position, I cut across the greater part of the triceps muscle about two inches above its insertion, and when this was done I found I could get the fragments together. Two silver wire sutures were next passed through both fragments, and the ends of the wires having been twisted so as thoroughly to secure the portions of bone in their place, were flattened down, and therefore they did not cause any projection. The progress of the patient was in every way satisfactory, and he was discharged with the wound soundly healed over the wires, upon the 23rd of August. He was able to flex, extend, pronate, and supinate the limb, and its strength was steadily improving when he left the Hospital.

II.—A CASE OF SUICIDE ATTEMPTED BY CUT-THROAT, AND TERMINATED BY DROWNING.

By FRANK OGSTON, M.D., Medical Examiner in Criminal Cases for the City and County of Aberdeen, etc.

A FEW months ago the body of a man was found lying on its back, half covered with water, on the seabeach near Aberdeen. It was described by the man who first saw it "as almost naked—the shirts having been drawn over the head, and hanging on the hands by the wrist buttons, the trousers and drawers drawn down below the knees, and kept on by the boots.

The body had not apparently been long in the water, as blood was oozing from the wounds presently to be described, and the flannel linder or under shirt was stained with bright-coloured blood. A black cloth coat was found about thirty yards further seawards than the body, like it, having been left by the receding tide; and a black wide-awake hat was picked up on the beach about forty yards south of the body.

The corpse was taken to the Police Deadhouse, and identified as that of a man who had been showing symptoms of insanity for some weeks.

Next day, a man walking along the bents found a walking-stick (identified subsequently as belonging to the deceased), and a piece of newspaper covered with blood. A few yards farther on he came upon a pool of blood, with a razor and a knife lying beside it. These articles were found about a hundred yards distant from the place where the body had been observed the previous day.

I saw the body the next day, after it had been conveyed to the Police Deadhouse. The clothes had then been put upon the corpse; but when opened up, I observed that the inner shirt or linder was stained with recent blood about the neck and over the breast. Both shirts, the drawers, and the trousers, were wet and full of sand.

The body presented a soaked appearance, as if it had lain in water. The skin of the outer aspect of the thighs was rough (cutis-anserina). The penis was retracted. The cuticle of the hands was wrinkled and sodden, and the hands were bluish (cholera hand). On turning the body face downwards, white watery froth at first, and then transparent water in abundance, flowed from the nostrils. No internal examination was allowed.

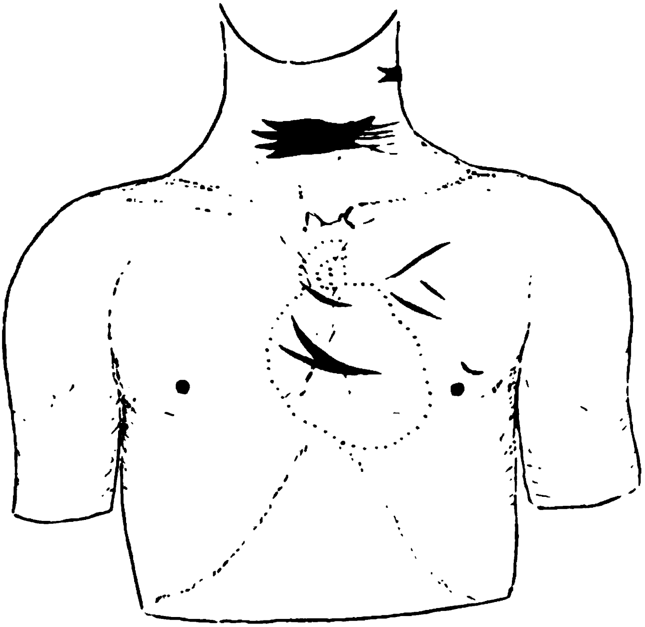
1. On the front of the chest, about the region of the heart, six cuts were seen, all superficial, and not even completely dividing the skin. The largest, which was about three inches in length, was furcated, the forked end being towards the right side, indicating that the wound had been made with the right hand, and in a direction from left to right.

2. Underneath the right angle of the jaw the neck was seamed by six superficial cuts, or rather scratches, almost exactly parallel to one another, the length of these scratches being about three inches each.

3. Across the lower portion of the pomum Adami was a large and gaping cut, from three to four inches long, which had penetrated into the larynx through the crico-thyroid membrane. That this cut had also been made with the right hand, and in a direction from left to right, the tentative cuts or superficial scratches, five in number, at its left end, and the four serrations at its right end, as well as the fact that the cut was deepest at its left end, clearly indicated. No bloodvessel of any importance was divided by this cut.

4. About an inch and a half below, and a little backwards from the left angle of the jaw, another cut was seen, which had penetrated to the depth of about an inch at its anterior end. This wound was single and sharp-angled at its posterior, divided into two by a deep serration at its anterior extremity. About its centre the external jugular vein was completely divided across, and clots of blood could be expressed from both its open mouths. The two last cuts in the neck were soaked with blood, partly clotted and partly fluid. The accompanying drawings will make this description of the numerous wounds clearer than words can do.

The history of this case seems to be that the man, insanely bent upon ending his life, had left his home, gone to a lonely place, and with a knife, which he had been seen to sharpen, or a razor, attempted to cut into his heart, hence the wounds on the chest, which the traced outline of the heart in the woodcut will make evident. Foiled in this, he then made the cuts under the right jaw, where he had merely scratched the skin; next he probably cut across the front of the neck, with the result only of opening into the windpipe. This also proving unsuccessful, the cut on the



left side of the neck was made more determinedly, but with no other consequence than that the external jugular vein was severed, and a quantity of blood lost.

Tired now of waiting for death, which would not come, he ran about 100 yards to the sea, divesting himself of his clothing as he went, and, finally, entangled by his shirts, which he had pulled over his head, and which clung to his wrists, and by his trousers and drawers, which had fallen down below his knees, he had stumbled in the water, and was drowned, to be cast ashore by the receding tide a few hours later.

That he did not die from hæmorrhage, from the wounds on the neck and chest, the unusual amount of blood about the cuts, and the quantity of clotted blood which was expressed from the external jugular vein, appear clearly to indicate; while, on the other hand, that he did die from drowning, the water and froth which poured from the nostrils in great abundance tends strongly to show.

That the case was one of suicide the circumstances leave no room for doubt, namely, that he was observed for some days to be behaving in an insane manner, that the cuts were all from left to right, that those on the chest were incisions, not stabs, and that the blood and weapons were found at a considerable distance from the corpse, while there were no appearances of a struggle having taken place, or of the body having been dragged to the sea, nor were the clothes torn.

Such cases of double attempt at suicide are not very uncommon, but they are too seldom put upon record. This is to be regretted, as cases like the above are valuable for teaching purposes.

III.—HYDRORRHŒA GRAVIDARUM (ENDOMETRITIS CATARRHALIS DECIDUALIS).

By John A. Macdougall, M.D., F.R.C.S., Carlisle.

The morbid condition known as Hydrorrhœa Gravidarum is of interest and importance to all obstetric practitioners, and, inasmuch as little is said concerning it in most English treatises on Midwifery, it has seemed to me that the record of certain cases which have come under my observation may not be altogether void of value.

Case I.—J. B., æt. 34, vi.-para, when first seen reckoned herself in the fifth month of pregnancy. She had been for some time in indifferent health, and was much alarmed on account of a very free discharge of fluid, at times markedly tinged with blood, which flowed from the vagina. This occurred, at first, suddenly and profusely, and had been in existence for some days previous to my examination. She also made mention of recurrent abdominal pain, labour-like in character, and of a certain amount of tenderness over the lower belly. Palpation verified the existence of the tenderness, but it did not disclose any extraordinary enlargement of the uterus, or any distinct difference in its normal condition as regarded its tension. Tactile examination P.V. revealed a somewhat enlarged and œdematous cervix, with no sign of uterine dilatation, but it gave unmistakable evidence that the discharge she complained of was intra-uterine in its origin.

Her condition as a whole puzzled me, for I considered (although I have other knowledge now) that had labour been about to supervene on an ordinary accidental rupture of the membranes it would either have occurred at an earlier period, or there would probably have been at the time of examination some existing evidence indicative of its advent.

Believing, as I did, that the membrane had ruptured, and that the coloured character of the fluid arose from some partial detachment of the placenta, she was advised to rest, opium was given her combined with some astringent, and she was directed to send should labour pains make their appearance. Days elapsed, but I heard nothing of her, and when I called again I was not a little astonished to find her discharging her household duties without complaint of pain, but able to demonstrate irrefragably that the discharge still continued. And so matters remained until gastric symptoms made their appearance, deepening notably the vital force of a not very vigorous woman. Added to this, the hæmorrhagic character of the discharge increased, and a steady rise in her evening temperature pointed to the fact that she was slowly being sapped. Still I waited, hoping the condition might improve, until with the advent of the seventh month her state was so serious—she was so feeble and so exsanguine—that interference was imperatively demanded. Labour was induced by the use of a sponge tent, followed by the introduction for a time of a gum elastic catheter, and was, after artificial rupture of the membranes, safely completed in about 36 hours. The child was barely alive; it was miserably developed, and it speedily perished. My examination of the membranes and the placenta was carefully made, for in spite of the difficulty I had in explaining such a loss of fluid by a limited separation of the placenta, I looked to the condition of that organ to throw light upon the case. In this I was disappointed, for although some small colourless clots were embedded in its substance, its margins, and indeed its whole uterine surface, were lined with a delicate membranous structure, betokening, I thought, a more than ordinary vital connexion with the uterus. Nor did the condition of the membranes help me, for there was but *one* aperture in them—that through which the child passed—thus rendering impossible the other explanation that had occurred to me, viz., that through some opening in them leakage had been steadily going on. The woman made a good though tedious recovery, unmarked in any way save that for some time the lochial discharge was very profuse and watery in character.

Case II.—E. S., æt. 36, ii.-para, when first seen reckoned herself as near the fifth month of pregnancy, a condition which up to that time had been normal in its progress. Then, without explicable cause or warning, she had a profuse discharge of bloody water from the vagina, a discharge which at the time of my visit had continued for some days. Palpation revealed the uterine tumour with its fundus midway to the umbilicus, while per vaginam the os was felt high up and undilated. Spite of rest, opium, and astringents, the discharge continued, until at the end of the sixth month premature labour terminated the gestation. The membranes were ruptured at the time of labour. The fœtus was small and ill-developed, and the placenta soft and friable.

Case III.—A. F., æt. 28, ii.-para; a lady who had previously had bad health, and who had a history of old uterine mischief, probably in the endometrium. Early in the fifth month of pregnancy she had sudden and profuse bloody discharge without pain or suffering. This continued for a time to occur only at intervals, but after the first month of its existence it was always present. Rest and astringents quite failed to check it, and as her state was through increasing anæmia becoming anxious, a well-known London obstetrician saw her. He was by no means satisfied as to her condition being one of pregnancy, and advised the dilatation of the cervix and exploration of the uterus. This was carried out, with, as a result, the expulsion of a six months' old fœtus! It was a male, very puny and very ill nourished, and in bulk very unlike the age to which we knew it had attained. Of the condition of the placenta and membranes I have unfortunately no record.

Case IV.—M. M., æt. 32, v.-para, in the seventh month of pregnancy, was, when walking at some distance from her home, much alarmed by a profuse gush of watery fluid from the vagina. She was seen within two hours of the occurrence, and then complained of slight labour-like pain in the back and groins. She also stated that previous to the escape of the fluid she had been quite as large as she usually was at full term, although on palpation one would have reckoned her little more than seven months gone. P.V. the os was so high that it could scarcely be reached, and it was quite undilated. This was on the morning of the 7th of June, and labour did not set in until the 24th of July. During the intervening time she had constant watery loss from the vagina, so profuse and continuous as to render her clothing wet and uncomfortable. At the time of delivery the membranes were ruptured by the hand, and a normal quantity of liquor amnii escaped.

The child, a male, was decidedly small for the age at which it was born.

Case V.—A lady, æt. 29, having a history of endometritis previous to the birth of her last child, eighteen months ago, should, in the ordinary course of events, have become poorly on the 25th of April last. The time passed, however, without any appearance of menstruation, and on the 10th of May she had a severe attack of uterine hæmorrhage, which lasted for two days. Thinking this was merely a delayed period, she did not request advice—indeed, she did not come under observation until the 19th. Then her story was that although the hæmorrhage ceased for a day or two it as certainly returned, and this in increasing quantity. Believing that she was pregnant—a belief which vaginal examination tended to confirm—and that her symptoms were probably those of a threatened early miscarriage, she was advised to rest and to have opium with some astringent. Matters, however, did not mend with her; spite of all care the leakage continued. At times the bleeding occurred by a sudden profuse gush, but as a rule it was more in the form of steady drainage. This loss began to tell upon her, she became anæmic and ill, and as there seemed no good prospect of improvement, I considered it advisable a month later, in the end of June, to evacuate the uterus. A sponge tent was introduced, and after twelve hours' dilatation chloroform was administered, and the uterine contents removed. Two facts struck me very forcibly during the performance of the operation—the first that there was no evidence of a low insertion of the placenta, and the second that the uterine cavity was expanded nearly a third more than was required for the size of the ovum. On this point there could be no mistake, for the finger was introduced well into the cavity before the ovum could be touched, and the free space that underlay it was undoubtedly the lower third of the expanded uterus. Indeed, the impression conveyed was that the ovum, instead of being in contact with the uterus all round, was merely lodged in its roof. Subsequently its base was ascertained to be fixed a little to one side of the fundus. On examination of the parts removed, the apoplectic state of the membranes was very noticeable. Over their surface, and it seemed even in their substance, were many patches of extravasated blood. The placenta was soft and friable, paler than usual in colour and more tufty in formation, while as regarded mere size the condition of the ovum was that of an eight weeks' gestation. Thirty-six hours after delivery, up to which time there had been no very severe discharge, so profuse a flow took place as to alarm very seriously both patient and nurse. When I visited her within three hours of its having made its appearance, it had soaked through the bedding and reached the floor, and this spite of the continuous use of very thick diapers.

Otherwise her state was quite satisfactory. Even in her mouth her temperature was only 100° F., and the quiet regularity of her pulse put out of count any marked condition of fever.

Careful vaginal examination revealed nothing abnormal as regarded the uterus, but it placed beyond all doubt the source of the discharge. Ergot, combined with strychnia, was given in full dose, and a generous dietary prescribed. Happily, the good general state never varied; and, spite the fact that for a whole week there continued to be such an amount of discharge as I have never witnessed after any normal labour at full term, her recovery was steady and satisfactory. With the exception that the first period that occurred after her illness was a more than usually profuse one, she has nothing extraordinary to relate.

Case VI.—This patient was under the care of Dr Harris of Dalston, by whose kindness I had an opportunity of seeing her, and from whose notes I quote:—

"M. C., æt. 28, ii.-para, was pregnant three and a half months, when she began to have discharges of watery fluid, especially at night, and accompanied latterly by more or less pain. There was no hæmorrhage until a month later, when it became tolerably constant, but was never copious. Only once was a clot passed.

"Fœtal movements began at four and a half months, but were always feeble. She now consulted a well-known surgeon in Newcastle, who told her that 'the child was not placed properly,' and ordered a daily injection of glycerine and tannin.

"Labour came on at the end of the sixth month. The placenta was very *dry* and friable, and I was struck with the *almost entire absence of fœtal membrane.* The fœtus was alive at birth. The lochial discharge was very profuse for two days, and was entirely hæmorrhagic in character."

The previous history of this lady is fraught with interest, for her first pregnancy was in almost every particular similar to this last. Near the fourth month she had hæmorrhagic discharge, a discharge which continued up to the end of the sixth, when labour supervened.

In her second pregnancy she had upon two occasions, and these corresponding in time with menstrual epochs of the fourth and fifth months, profuse discharge of watery colourless fluid. Similar phenomena, however, never recurred, and she carried her child to full term.

Case VII.—For the notes in this case I am indebted to my friend Dr Angus Macdonald.

"Mrs C., æt. 30, iii.-para, was on the 3rd of September 1879, at about the middle of the fourth month of utero-gestation, when she was suddenly seized with such a copious sanguineous flow from the uterus, that a medical friend who saw her in my absence, believing that abortion was certain, introduced a sponge tent into the cervix. I saw her in the course of the evening, and, finding the bleeding arrested, removed the tent. There were no pains.

"Delivery did not take place till the 14th of February 1880, when a female child, weighing 2¾ lbs., was delivered by the breech. But the curious point of the case was that for the entire period of pregnancy the patient was subject to a free flow of pale-coloured fluid from the vagina. Every fortnight or three weeks this fluid accumulated, and distinctly led to marked enlargement of the abdominal tumour, whereupon an extra amount of fluid would escape, and the tumour would get markedly reduced in size.

"I examined the placenta and membranes with the greatest care by the naked eye at the delivery, and could detect no gross lesion in them. The bag of membranes proper remained unbroken till the labour was well advanced. The child, though small and feeble, ultimately throve well. The recovery of the mother was rapid, and there was no marked increase of the lochial flow."

The narration of these cases brings into sufficient prominence the leading symptoms of the disease, and yet some of them are so important that they admit of more detailed consideration. And this has origin in the fact that certain of them may entirely mislead the practitioner. In two, at least, of the cases which have come under my personal observation, I believed that miscarriage pure and simple was threatened, and it was only as days ran and brought with them not only continuance of the discharge, but an entire absence of uterine action, that my mistake became apparent. Dr Macdonald's case, too, illustrates this well, for there can be no reasonable doubt that what his friend mistook for blood was really coloured fluid from the hydroperion.

Careful examination of the character of the discharge will in a certain number of cases guide us aright, for I have been able once or twice by such examination, and aided by the history of the case, to determine the existing condition of matters. The period to which the pregnancy has reached may also help us. Abortion after the fourth month, without any adequate exciting cause, is a comparatively rare event; and when in the absence of this, and between the fourth and sixth month, a sudden flow of colourless or bloodstained fluid takes place from the vagina, unassociated with any evidence of uterine dilatation or action, we may form a well-grounded suspicion that hydrorrhœa is the condition we have to deal with. But this is not the only difficulty which may arise in the diagnosis of such a case. In Case III., where I had the opinion of a very able obstetrician, the weight of evidence in his reckoning was against pregnancy, and in favour of a rapidly growing soft fibroma of the uterus. Nor is this all, for Matthews Duncan has demonstrated the fact that labour may be long delayed after the discharge of the liquor amnii, and that during this period of delay frequent discharge of freshly-secreted fluid may take place. Bar the evidence of blood in the discharge, and the fluid in all cases of hydrorrhœa is not bloody, and the noticeable feature that the uterus does not become shrunken and contracted, the two conditions are not very dissimilar.

But, given a correct diagnosis, what are we to say as to treatment? In the very large majority of cases, beyond rest, the maintenance so far as possible of the recumbent position, the avoidance of all such conditions as might lead to pelvic congestion, and such measures as are best calculated to maintain a high standard of health, we are well-nigh powerless. True, as a general rule these are all-sufficient, but to this rule, as to all others, there are exceptions, which Case I. and Case IV. illustrate. And in prognosis I would be much guided by the period at which the discharge first appears, and by its character. Should it come in early days and be truly hæmorrhagic in constitution, then I would dread that either naturally or artificially labour would be prematurely terminated. In Case II., and in that under the care of Dr Harris, the very best means were employed to avert disaster, for the patients were kept in bed and at absolute rest, and yet in both cases there came a time when, possibly from some change in the diseased decidual lining of the uterus, labour had its origin. In some instances, however, the accoucheur must himself take action, for I reckoned that I placed in very considerable jeopardy the life of my first patient by following too implicitly the doctrine of, in such cases, leaving well alone.

With the admission of the fact that treatment has little influence upon the disease, there arises the important question as to what are the conditions which underlie it. The old theory was one which very naturally occurs to the practitioner when considering such a case as that first narrated—that of an aperture in the membranes through which the amniotic fluid steadily and continuously drains. That this is, however, a mistake every case here recorded proves; for in all it was noted that the membranes were entire on the accession of labour. Moreover, in two or three I made a very careful examination of these structures, and in no instance did I find that more than one opening existed in them —that through which the child had passed. The fluid which escapes is not amniotic in the true sense of the word, it is the outpouring of gland structures in the decidua which have undergone a morbid increase in number and in size. To Hegar I am indebted for a minute knowledge of these anatomical changes. In the course of a very valuable paper by him on Hydrorrhœa Gravidarum in the *Monatschrift für Geburtskunde und Frauenkrankheiten* [1] for 1863, he thus writes :—" The anatomical basis is a hypertrophic development of the uterine mucous membrane, accompanied by hyperæmia and abundance of vessels which extends itself not alone in the interstitial tissue, but also, according to my examinations, to the glandular bodies. There is present a lively process of new cell formation, and the separate tissue parts and tissue elements possess an unusual strength and cultivation. Particularly did I find the glands in such number and size as I have indeed rarely seen them in the first months of pregnancy. One remarked therewith much less of the degenerating metamorphosis of the decidua than is otherwise the case at the eighth month. May we now describe this process as a chronic inflammation, or may we prefer to speak of it as simply a hypertrophic condition of the uterine mucous membrane? Assuredly is it that the principal symptom of the hydrorrhœa—the increased secretion of the mucosa—finds a perfectly adequate explanation in the anatomical discoveries. The secretion is furnished pre-eminently by the glands."

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[1] *Monatschrift für Geburtskunde und Frauenkrankheiten*, Hischwald, Berlin, 1863.

As regards the nature of the disease I believe it to be an endometritis catarrhalis decidualis. The symptoms and the anatomical conditions which underlie it lead to this belief.

Endometritis in connexion with pregnancy is well known. One finds, I fancy, its most pronounced development in certain cases of miscarriage occurring in the course of typhoid fever, in one of which I know the decidua was so hypertrophied and developed that it was, on intra-uterine examination, mistaken for the placenta, a structure which on subsequent investigation was found to have been discharged intact. And as bearing upon this especial side of the subject Case V. is one to me of peculiar interest. Hydrorrhœa, and therefore the condition of which it is a symptom, is said not to occur until after the third month, and I may be wrong in reckoning that a hypertrophic state of the decidua was in existence, in the case of this lady, before delivery took place. My difficulty, however, lies in explaining on any other hypothesis the cause of the profuse hæmorrhages, the undoubtedly too big cavity of the uterus and the apoplectic condition of the membranes. The size of the uterine cavity was a striking feature in the case, and it occurred to me that it had arisen either from the retention from time to time in its lower segment of bloody fluid from the hydroperion, or that, may be, the condition of endometritis, which I presume was in existence, had brought about that peculiar globose formation of the uterus which is from time to time noted in connexion with this disease.

That the profuse lochial discharge points in a similar direction I am inclined to believe; and difficult as it is to explain why thirty-six hours should have elapsed after the uterus was cleared before the watery fluid made its appearance, I venture to guess that the observation of Hegar as to the fact that in abortion the mucous membrane of the uterus separates itself at *different* depths may throw light upon it. In view of this observation, it is possible that it was only after somewhat of that natural process of necrosis which must ever follow labour that the mouths of the enlarged decidual glands were free enough to pour out their increased secretion. Be this as it may, the strongest teaching of the case in my reckoning lies in the knowledge of the possibility that even within the first three months of pregnancy a free discharge of bloody fluid need not of necessity indicate threatened miscarriage; it may point to the existence of an endometritis catarrhalis decidualis.

IV.—NOTE OF A CASE OF MEASLES COMPLICATING PREGNANCY AND PARTURITION.

By Angus Macdonald, M.D.

(*Read before the Edinburgh Obstetrical Society, 10th December* 1884.)

For some time back there has been occasionally heard in the Society a sort of grumble that the character of the papers produced for it by some of us is too heavy and too elaborate, and that the usefulness as well as the agreeableness of the Society would be added to by the admixture occasionally of short notes referring to interesting subjects, which might form material for free and easy discussion. As I stand convicted of having sinned, if the production of somewhat lengthy papers be regarded as a sin, I have tried to make the best amend in my power by meeting the objectors on their own ground, and accordingly I take the liberty of reading to the Society the following note of a case of pregnancy and parturition complicated by measles which may, I hope, be interesting to some of the members of the Society, as it is an undoubtedly rare complication of these conditions:—

Mrs Y., æt. 26, I^a, residing in Edinburgh, and expecting her confinement on the 22nd of June 1884, had the misfortune to have measles in her house in the month of May, a little stepson having caught the disorder. This patient was assiduously watched by her for a couple of days until the measles appeared. The lady herself was not aware of having had measles herself. She accordingly was at once removed to another floor of the house, and on the following day to rooms in a part of the city distant from her home 1½ miles.

June 5th.—A full fortnight after removal she had some sore throat and sneezing, and along with these symptoms the rash of measles appeared on her skin. Her morning temperature was 99°·6, her evening 102°.

June 6th.—The measles are very well out all over the body. Slight cough. Temperature as on the previous day. During the night the patient complained of some pains in the back.

June 7th.—At morning visit the cavity of the cervix was found completely dilated, and the outer os about the size of a shilling, the child's head being pressed against it, covered with a thin layer of water. The morning temperature was 99°·5, the evening 100°·2. In the course of the night labour became fully established.

June 8th.—At 5.25 A.M. the patient was delivered of a healthy female child. During the delivery she complained of a distressing feeling of weakness, and of a sensation of faintness. The pulse was quick and small. Some chloroform was given during the second stage, which was easy, and did not last over two hours. There was smart post-partum hæmorrhage, which was checked by the exhibition of ergotin under the skin before the placenta was removed, and by kneading the uterus. The temperature shortly after delivery was subnormal. Brandy had to be repeatedly administered after delivery to check the feeling of faintness and sickness. In the evening the temperature rose to 100°·2. The patient made an uninterruptedly good recovery, the temperature never afterwards reaching over 100°. The milk appeared naturally, and the entire puerperium exhibited nothing to be specially remarked upon.

About the end of the first week of life the baby showed a distinct punctated rash, which may or may not have been measles, but which was unaccompanied by any rise in temperature or pulse.

After the scholarly contribution and masterly analysis of cases of this complication lately brought to the notice of the Society by Dr Underhill, it is quite unnecessary for me to go back on the literature of the subject further than to refer the members of the Society to that paper. As cases of this kind are, however, so very rare, it is incumbent upon all members to record them for the public benefit.

It will be noticed from the above record that the case was, on the whole, a very mild one, and was free from any chest complication. But all the same, it was evident that the labour was precipitated by the fever, as the 22nd of June was the earliest date on which, by careful analysis, we had calculated the labour would come on, whereas it supervened on the third day after the appearance of the rash, or what would be the seventh day of the fever, although this was sixteen days before the period of expected delivery. It is also noticed that the double demand upon the patient's strength made by the fever and the labour was specially marked in its power of inducing depression. The complaint of excessive weakness made both before and after the administration of chloroform were exceedingly unusual.

Being aware of the special tendency to hæmorrhage determined by measles, I had the ergotin ready in the syringe, for use the moment the child's head was born. I had forceps ready also in case the second stage was unduly or unsafely prolonged. But I did not need to use the latter. There was no bleeding before the birth of the child, or any other evidence to indicate hæmorrhagic endometritis properly so called. But there was certainly a special tendency to post-partum hæmorrhage which might have led to serious consequences, had it not been checked by the injection of ergotin.

From a consideration of this case, and, indeed, from a review of the whole matter, it appears to me that measles are not to be dreaded so much in connexion with pregnancy as we have hitherto considered them. Such of us as were trained by Sir James Y. Simpson—and his pupils still form a large proportion of this Society—have framed our ideas of measles in connexion with pregnancy rather too closely on the type of the case he used to relate to us. That particular case assumed the form of intense septicæmia. I am not perfectly satisfied that the case was one of measles, as no rash came out, and the evidence from the child's having ultimately exhibited a measly rash can hardly count for much, considering the frequency with which infants suffer from such rashes where there is no possibility of infection. At any rate, from the two cases which have come under my own knowledge, there is no evidence to indicate that the measles poison tends to act as a general septic influence in pregnancy or in the puerperium.

It appears to me that measles are dangerous in pregnancy and the lying-in period—

1. Because they have an undoubted tendency to produce abortion.
2. Because they are associated with a tendency to pulmonary inflammation.
3. Since the delivery, if it supervenes, is undergone when the patient is already weakened by fever, it is peculiarly liable to weaken and exhaust the patient.
4. Because measles have an undoubted tendency to induce hæmorrhagic endometritis.

Provided, however, chest complications are absent, or moderately developed, the delivery is completed by the natural efforts, or by aid of art, before the condition of exhaustion becomes dangerous, and the hæmorrhagic tendency is in abeyance, it does not appear that measles need be looked upon as a complication of pregnancy or of parturition that should cause especial alarm.

V.—NOTE ON A CASE OF DIMINUTION OF ALBUMINURIA IN PREGNANCY COINCIDENT WITH THE DEATH OF THE FŒTUS.

By A. H. Freeland Barbour, M.D.

(Read before the Edinburgh Obstetrical Society, 10th December 1884.)

The following case appears worthy of being recorded:—A. B., æt. 21, enjoyed good health up to her marriage last December. Three months after marriage she had an abortion at two and a half months. During this pregnancy there were no symptoms worthy of note. After one menstrual period she conceived again. About the fourth month she noticed swelling of the feet, which gradually increased until she could no longer wear boots. As the swelling affected also the face and other parts of the body, she came to Professor Simpson to seek advice. She was then about seven months pregnant. The fœtal heart was quite distinct. There was great œdema of the lower limbs and abdominal parietes, and the urine contained three-quarters albumen. Unfortunately, it was not examined by the clerk in charge for tube-casts. Milk diet was prescribed with tincture of perchloride of iron. She returned after a week's interval with the œdema as marked as formerly, and the urine still containing about three-quarters albumen. She had been unable to keep rigorously to the milk diet.

A fortnight afterwards I saw her at her own house, and was surprised to find that the œdema had entirely disappeared. She said it had gradually gone away since her last visit, and she had not come to report herself at the Infirmary. On testing the urine, it contained only a slight trace of albumen. Repeated examination could detect no fœtal heart sounds, and movements had not been felt for at least a fortnight. On the following day labour came on, and the patient was rapidly delivered of a fœtus about the size of a seven months' one. It had evidently been dead some time, as the skin was peeling. During the puerperium the urine showed some increase in the albumen again, which may have been due to the lochial discharge, as it was not drawn off with the catheter.

In this case there was then two facts: a rapid diminution of the albumen in the urine, which fell from three-quarters to a mere trace, with disappearance of an extensive œdema. About the same time as this occurred the fœtus died in utero. The question that at once suggested itself was: Is this a mere coincidence, or is there a connexion between these facts. I have looked up the literature of albuminuria during pregnancy, and find the following references to this occurrence. Dr Underhill mentioned a similar case to the Society some years ago. As it was not published then, he has kindly given me the following note of it:—"The case I mentioned to the Society some time ago was briefly as follows:—A married woman, aged about 34, who had had four labours at the full time, and one or two miscarriages after the last child was born, came under my care in 1878. She told me that she had been pregnant two years previously, and had been so ill with albuminuria, headaches, sickness, and general impaired health, that abortion was induced at the third or fourth month. When I first saw her she had occasionally a small quantity of albumen in her urine, often a mere trace, sometimes none at all. She became pregnant in the end of August 1878, and from that time the albumen began to increase in quantity, until about the New Year time it was about $\frac{1}{6}$ to $\frac{1}{8}$ of the urine. Her health was deteriorating *pari passu*. She had headaches, anæmia, and sickness, and we seriously debated the propriety of inducing abortion, but deferred it in the hope that some change for the better might take place. About the middle of January the fœtus died, and from that time onward the general health showed marked and progressive improvement, and the albumen rapidly diminished. She miscarried early in March 1879 of a dead fœtus of about 4½ months, and which had all the appearance of having been dead some weeks. At this time the albumen had almost entirely disappeared. She never became pregnant again, and her husband died a year or two afterwards. She is now (1884) in fair health, and I have found no albumen the last time or two on which I have examined the urine."

Leishman gives in a footnote to his last edition a case mentioned to him by Dr J. D. Maclaren, in which albuminuria appeared at the sixth month, and continued to the eighth, when suddenly profuse diüresis set in, accompanied with disappearance of the dropsy and albumen. A week afterwards, a dead child was born, which seemed to have died at the time the diuresis occurred.

Spiegelberg also mentions a case of albuminuria in a case of extra-uterine gestation, in which it and the dropsy disappeared after the death of the fœtus.

These four cases are, so far as I know, all that have been placed on record.

From a few cases we are not justified in drawing any conclusions. If a sufficient number of cases are observed to show that the occurrence of diminution of albuminuria with death of the fœtus in utero is more than a coincidence, a reasonable inference would be that the albumen in the urine is affected by the life of the fœtus, *i.e.*, that in some cases albuminuria is due to a condition of the maternal blood induced by pregnancy. As the mechanical conditions with regard to the pressure of the uterus on the ureters remain the same from the death of the fœtus to its expulsion, the diminution of the albuminuria in the cases referred to goes against the theory which accounts for the albuminuria by this pressure.

In connexion with this subject, I may refer to a paper by Levret on varix and œdema during pregnancy, in which he shows that these conditions improve when the fœtus dies. From this he concludes that they are in some cases due to the condition of the blood produced by pregnancy.

VI.—PECULIAR CASE OF MANIA TRANSITORIA.

By William James Spence, L.R.C.P.E., etc., House Surgeon (late House Physician), Bradford Infirmary.

G. P., a drayman, aged 31, was admitted under Mr Appleyard shortly before six on the evening of 17th September 1884. He was brought to the Infirmary tied down to a stretcher with ropes. The men who accompanied him gave the following account:—About two o'clock in the afternoon, when near the Bradford Wholesale Vegetable Market, he was seen to fall from his dray. He was lifted up and assisted on again by some of his fellow-workmen, who thought he was under the influence of alcohol. They expressed surprise at this, as he has always been considered very temperate. After going some 50 yards he fell off again. This time his head came in violent contact with the ground, but there was no wound. He appeared dazed and stupid, and was carried into a wooden cabin and laid upon a settle, where he dozed for upwards of an hour. Some of his mates then came in and attempted to rouse him, when he became so violent that it took several men to hold him down. A medical man was sent for, and recommended his removal to the Infirmary.

Upon admission, he appeared to be suffering from a violent form of acute mania. He was shouting at the top of his voice, struggling and gesticulating with great vehemence. He tried to bite every one who came near him, and said we wanted to "do" for him. His head and face were bathed in perspiration, the pupils were normal, and the pulse between 75 and 80. The temperature could not be taken. There was no external injury.

With considerable difficulty he was undressed, put to bed and strapped down to it. I ordered him a draught containing half a drachm of chloral hydrate and one drachm of bromide of potassium. This he took, after much persuasion, from one of his companions. About an hour afterwards the hypnotic began to take effect. He still continued very violent, but dozed for periods of three to ten minutes, at varying intervals up to twelve o'clock, when he fell into a sound sleep and slept for two hours and a half. When he awoke he asked—What was the matter? where he was? why he was fastened down? and several other questions. As he appeared quite quiet and sensible, the straps were removed, and he soon went off to sleep again and slept soundly until six.

When I saw him at 8 A.M. he said he felt quite better, and asked to be allowed to go home. The back of his head was a little sore and his wrists where they had been tied with the ropes, but he complained of nothing else. In answer to my inquiries, he told me the last thing he remembered was the act of getting on to his dray about half-past two in the afternoon. He was about to descend a steep hill, and got off for the purpose of putting the slipper under one of the wheels, his foot slipped on the pavement and he fell with the back of his head on the causeway. He remembers getting on to the dray, but nothing more until between two and three the following morning, when he found himself at the Infirmary. The distance from where he first fell to the market is fully half a mile through some of the busiest streets in Bradford. He is at a loss to know how he got to the market, but supposes the horse, who is accustomed to the journey, went without guidance on his part. He, at any rate, remembers nothing of the journey. He is a very steady man, almost a teetotaller, and had tasted no alcohol on the day of the accident. His family history is good; there is no hereditary tendency to brain disorder. He is married and has three children—two boys and one girl—all three, bright and intelligent.

He left the Infirmary, at his own request, on 19th September. He was anxious to get home to his family. I have seen him twice since, the last time being on 11th November (nearly two months after the accident). He was then well, and had had no return of the symptoms.

VII.—STUDY OF A FORM OF ALBUMINURIA.

By Stanley M. Rendall, M.D. Paris, M.B. Edin., Aix-les-Bains, Savoie.

(*Continued from page* 633.)

Pavy in his papers on "Assimilation and the Influence of its Defects on the Urine," *Lancet* 1863, says, "I cannot say that all the albumen ingested with the food must be converted into peptone before absorption, but it is evident from what has preceded that it must undergo some process of elaboration or assimilation before it is fitted for entering the circulation. It is possible that some albumen may be absorbed as such with fat by the lacteals, but this in traversing the mesenteric glands would be subjected to the influence of an assimilating process. On account of its slightly diffusible properties, it is not likely to be capable of permeating the mucous membrane of the alimentary canal, and entering the portal circulation to any significant extent. Whatever might be the result, if thus absorbed and made to traverse the liver in very minute quantity, experiment proves that when injected slowly into a branch of the portal vein, the liver allows it to pass without exciting the necessary change upon it to adapt it for subsequent retention in the system. Upon injecting slowly half an ounce of the white of egg diluted with an equal quantity of water into one of the mesenteric veins of a dog, the urine which had been previously ascertained to be free from albumen was in three-quarters of an hour's time found to be loaded with this principle."

Dr Pavy found that in some instances when he injected albumen directly into the duodenum, so as to avoid the influence of the gastric digestion, that a certain amount of albumen appeared in the urine.

Pavy also observed in one case that the quantity of albumen contained in the urine before breakfast was 13·26 gr. per litre; in the three hours which followed the meal the proportion was 21·48 gr. In another the quantity before food was 15 grs., after, 22·63 gr. A third, 14·17, and after, 22·17 gr. He founded on these facts a statement that the oscillation in the quantity of albumen eliminated depended upon the different states in which it existed in the blood, and that the filtrability of albumen depended on its molecular condition. He showed that in the same individual albumen can present at different times and with identical characters in as far as physical appearances go, a capacity of filtration extremely variable. He submitted to dialysis through a vegetable parchment strongly albuminous urine. At the end of twenty-four hours a large portion of the albumen had traversed the membrane. Six months later he performed the same experiment under exactly similar conditions with the same patient, and found that but a very small quantity had passed through at the end of forty-eight hours, so that he inferred that the molecular and physical properties of the albumen in this case were greatly altered. He made similar experiments with a number of other albuminous patients with the same results.'

M. Lépine, in the *Revue Mensuelle* 1880, also came to the same results—" Des recherches faites récemment dans mon laboratoire me permettent d'affirmer, que dans certains cas l'albumine rendue dans l'urine de la digestion diffuse mieux que celle de l'urine du jeune du même malade, et que soumise parallèlement à cette dernière à l'influence de la digestion artificielle elle se transforme plus vite en peptone. De tels resultats sont décisifs. Non seulement l'urine de la digestion peut être chef un albuminurique, plus riche en albumine, mais il est actuellement demontré par les recherches nouvelles qu'elle renfermé au moins en partie une albumine d'une autre qualité. Il y a donc ainsi que l'avait soupçonné Parkes, une albuminurie alimentaire analogue au diabète alimentaire de Bernard, dû à la non utilisation des matières ternaires absorbées par le tube intestinal."

In some remarks on a peculiar form of albumen by Gower, *Lancet*, July 1878, he says a small quantity of cold nitric acid produced an abundant precipitate, but there was none with heat and nitric acid. Heat dissolved the precipitate produced by cold nitric acid, and a large excess of acid also redissolved the precipitate. So that the albumen here present differed from that of the serum usually present in the urine, principally by its solubility at the temperature of boiling water. Also it was not precipitated by a small quantity of absolute alcohol. This would seem to exclude it from belonging to the peptones. This at least is an exception to the rule laid down by M. Becquerel that " Albumen de toutes les urines albumineuses se coagulent parfaitement par la chaleur et l'acide azotique."

MM. Lauder Brunton and D'Arcy Power employed another method than dialysis (that of Pavy), viz., finding out the different coagulating points of different specimens of albumen. The process they recommend is the following. It consists in holding a thermometer in the urine while it is being very gently heated in a test-tube over a spirit lamp, and noting the temperature at which the urine begins to grow milky from the commencing coagulation. The thermometer may be held in the test-tube by means of a conical indiarubber stopper with a hole in the middle by which the thermometer passes. The first point they attempted to settle was, did the coagulating point of albumen in albuminuria vary, and they found that it did from the following cases:—

1. R. A. Case of intermittent albuminuria; coagulating point of one specimen of albumen was 173° F.

2. J. V. Albuminuria from pregnancy; one specimen coagulated at 150° F.

3. H. H. Waxy kidney; one specimen coagulated at 164° F.
4. Chronic Bright's disease „ „ 180° F.
5. „ „ „ 144° F.

The coagulating point varied not only in different patients, but at different times in the same patient. Thus in one case it was usually at 164°; on one occasion it sank to 152° F., and on another rose to 171° F. The coagulating point was raised by the presence of urea, and lowered by that of uric acid, other acids, and neutral salts. But diluting the urine with water until it has a specific gravity of 1005 altered the coagulating point, sometimes raising, sometimes depressing it, but did not render it constant. They say —"As the coagulating point of albumen in urine varied considerably, notwithstanding our efforts to get rid of the urea and neutral salt by dilution, it occurred to us that it would be advisable to ascertain whether the coagulating point of the soluble albuminous substances produced by the action of pancreatic juice upon solid albuminous bodies varied at different stages of the digestive process. For it is evident that if this should be the case, and that soluble albuminous bodies should be absorbed into the blood and excreted by the kidneys in the same way as raw white of egg, they would cause the temperature at which coagulation occurred in the urine to vary apart from any influence of urea, uric acid, or salts contained in it. In order to ascertain this, fibrin obtained from pig's blood was digested in water and some pancreatine in a water bath for about three hours at a temperature of 100° to 105° F., until the fibrine had disappeared. Undiluted the solution coagulated in different experiments at 142°, 138–142°, 128–134°, 134°, varying on each separate occasion. The true point appears to be 128°–134° F. Where the solution was diluted with its own bulk of water coagulation occurred at 136°–140° F., and at 144° F.

"The cause of this variability in the coagulating point probably is, that during the process of heating more or less digestion of the albumen by the pancreatine occurs." After standing forty-eight hours, indol was present, and the coagulating point was 168° F.

"Another portion of the fibrine was digested with pancreatine, and a portion of the solution tested after an hour's digestion in the water bath. Coagulation occurred at 146°–150° F. A portion was again tested after two hours and fifty minutes' digestion. The coagulating point had fallen to 138°-140° F."

Various experiments were made to find out the effect of food in causing albumen to appear in the urine. The effect of food in altering the coagulating point of the urine in cases of albuminuria. The presence of peptones, pepsin, and diastatic ferments. The albuminous substances in the urine which are derived from the blood; the coagulating point of urine in different diseases; and they summed up as follows:—

"There are various albuminous bodies which appear in the urine; some of these are derived from the digestive canal, and some from the blood, of which they form ordinary constituents. Those derived from the digestive canal may be either albuminous substances absorbed without undergoing digestion, as, for example, the white of raw eggs. Soluble albuminous substances produced from coagulated albuminous bodies by incomplete digestion or peptones. Those albuminous bodies, which form constituents of the blood, and which we have noticed in the urine, are paraglobulin and serum albumen. The former is in comparatively small quantity, the latter forming the great bulk of the albumen in ordinary albuminuria. The effect of food is to increase the quantity of albumen in the urine, or even make it appear when it is absent during fasting. Its effect on the coagulating point is not constant, though it generally lowers it. This may be due to the fact, which we have observed, that while the earlier products of the pancreatic digestion of fibrine have a lower coagulating point, the later products have one which is higher than that of serum albumen. In connexion with this point it is interesting to notice that, while pepsin occurs normally in the urine we failed to find it, possibly because we operated upon too small a quantity, and, nevertheless, we obtained evidence of the presence of pancreatic ferment. This is the first case we know of in which this ferment has been found in the urine, and its loss in unusual quantity may possibly prove injurious to digestion, and be one cause why the albuminous products of imperfect digestion appear in the urine. In one case recorded by one of us elsewhere pancreatine was found to lessen the albumen or even remove it entirely from the urine."

I have given these conclusions of MM. Brunton and Power at such length, as they seem to bear in an important way on the cases now in question of post-cibal albuminuria, and also they seem to bear out in some measure the varieties of albuminuria described by M. Mialhe.

In the experiments instituted by Dr Saundby to decide whether the amount of albumen present in urine was increased after eating, and whether the albumen passed after eating diffused more readily than that passed before taking food, he found that the maximum amount of albumen was excreted in the after-breakfast period, and this relation is maintained in spite of the more albuminous character of the mid-day meal, and that as a rule the albumen appeared to diffuse in proportion to the acidity of the urine.

From a study of these different results, arrived at by various experimenters, it is clear that the albumen of the blood of all the albumenurics does not possess absolutely the same characters, and that, more than this, the albumen of the blood in the same patient is not always the same, as proved by its different diffusibility at different times (Pavy), and by its coagulating at one time at one temperature and at another time at another (Brunton and Power); and that though the albumen of the albuminous urines coagulates perfectly by heat and nitric acid, it still acts very differently at various times and under various circumstances with these same reagents; and, indeed, in one case reported by Dr Gowers the albumen refused to coagulate with heat and nitric acid at all; and even in the everyday experience at the bed side one is often struck with the varying difficulty in getting a precipitate with these reagents. Of all the factors which influence the variability of the albumen in its reaction with heat and its diffusibility, the chief seems to be the digestive process (Gubler, Brunton and Power, Saundby). And when we consider the number of transformations the blood has to undergo in this process before it is assimilated the fact need not astonish. The changes which take place in the alimentary tract are only the first in order which intervene between the simple act of ingestion and the complex and little understood one of assimilation. But from the close relation of the appearance of albuminuria and the entry of food into the intestines it would seem that, in these cases at least, these early changes are some of the most important in its pathogeny.

In its passage through the alimentary canal up to the time of its absorption into the system the evolution of albumen is fairly well known, but there anything like intimate knowledge of its changes cease, beyond the fact that it is excreted in the urine under normal conditions as urea and uric acid, and that between its absorption into the circulatory system and its excretion it passes through the liver, there undergoing, according to M. Béchard, a division into two parts, one portion serving the glycogenic function of the liver, and another being used up in a separation of the azotized elements of the organism. In other words, albumen is partly a respiratory and partly a plastic aliment.

We have been accustomed to consider that the animal differs from the vegetable in not making a synthesis of the proteid substances, but in taking them direct from the tissues of other species. But according to the eminent physiologist Claud Bernard, such is not the case. "Nous ne voyons nul rapport direct entre l'aliment et le tissu similaire, et nous pensons que au moment où s'accomplit l'acte de nutrition réel et véritable, les matériaux sur lesquels opère la cellule sont dans un état avancé de décomposition." "Si cette vue est vraie, elle fait disparaître la dernière des barrières que l'on a voulu établir entre les animaux et les végétaux, ceux-ci tirant leurs aliments de matériaux, minéraux simples, tandisqu'il faudrait aux animaux des matériaux complexes. En réalité il faut aux unes et aux autres des aliments très simples: car il faut considérer l'aliment devant la cellule végétale ou animale qui va l'utiliser, et non dans l'état où il est puisé au dehors. La digestion, fonction accessoire, n'a peut-être pour but que de combler cette différence apparente, et de rendre la cellule animale et la cellule végétale égales devant l'aliment." This would render the various changes that the proteids undergo more than ever complex, necessitating a preliminary analysis, because M. Claud Bernard says, "La cellule vitale n'est pas condamnée à faire la synthèse nutritive, au moyen des principes immédiats que lui viennent, du dehors, mais seulement au moyen des principes élémentaires." M. Bernard says, again, "L'albumine du sang, les substances albuminoides des tissus ne sortent pas directement des aliments, car préalablement elles se désagrégent dans l'estomac, l'albumine s'y transforme en peptone, produit mal determiné et mal connu, mais analogue à la gélatine, qui n'existe précisement pas dans les tissus, et qui n'est que le résultat de leur ébullition prolongée. Il faut donc qu'il existe dans l'organisme animal des éléments cellulaires, qui forment par synthèse de l'albumine et des produits azotés absolument comme il en existe chez l'embryon et chez l'adulte, qui forment le sucre et l'amidon. L'idée de l'évolution chimique accomplie par des éléments cellulaires prend donc de plus en plus une généralité qui tend à en faire une des lois les plus importantes du développement et de la nutrition."

So that we see how easy in all these complex transformations of albumen would it be for one or more forms to exist which are unfit for assimilation, and which, in consequence, must be thrown off out of the system as useless by the kidney, and so constituting an albuminuria; and as the fault here lies in the digestion that "fonction accessoire qui n'a peut-ètre pour but que de combler cette différence apparente, et de rendre la cellule animale et la cellule végétale égales devant l'aliment;" the albuminuria is post-cibal. Other conditions may exist than that of digestion, which destroy the relation between the animal cell and the aliment. Thus M. Robin has drawn attention to the effect of a deficient supply of oxygen, causing albuminuria—"J'ai pensé que si pendant un certain temps suffisament prolongé l'albumine venait à subir dans la circulation une quantité de combustion très notablement moindre qu'à l'état normal, elle pourrait passer en nature dans les urines au lieu de n'être éliminée qu'à l'état d'urée et d'acide urique," and thus he accounts for the albuminuria in croup, capillary bronchitis, emphysema, phthisis, etc.

But in this digestive albuminuria the deficiency of oxygen is not the most important factor, though it may have some influence on its causation, considering the anæmic state that many of those suffering from it are in, and a deficient combustion would certainly

seem to have something to say to the almost constant presence in those cases of oxaluria. As this latter condition is probably due to an incomplete transformation of sugar, the combustion not being complete, and producing, instead of CO_2, a carbonic acid C_2O_3, or oxalic acid.

In what the deficiency in the digestion consists is very difficult to say, though its results are the production of an albumen easily absorbed into the circulatory torrent, but unfit for immediate assimilation by the tissues, and requiring, before it can be thus employed, other changes which probably can take place in the circulatory system. However, before these alterations are completed, and during their production, a certain amount of this non-assimilable albumen is excreted by the kidney as a foreign body. The quantity appearing in the urine depending on various factors, such as the amount of nitrogenous principles ingested and their insufficient transformation in the alimentary canal, the rapidity of absorption of the abnormal albumens, and the rapidity of their ultimate transformations in the blood.

If the urine be passed at short intervals between any two given meals, that ejected a short time after the repast contains most albumen, and the quantity contained in the successive urines gradually diminishes until they become clear, although, of course, there is plenty of albumen left in the blood. The urine now remaining clear until the next ingestion of food not being due to there being no albumen to excrete, but to the albumen which remains being of a different nature from that which passes into the urine. If the albumen excreted were collected and slowly injected into the veins, as in the experiment of Stokvis, it would probably not appear again any more than it did in his case, though not from the reason he ascribed to it, viz., that it was the same in nature as that contained in the blood serum, and therefore was not excreted by healthy kidneys. But rather its non-appearance would be due to the fact that it had had time to undergo the necessary changes which had not taken place in the first instance, and that, as a result of those changes, it had no tendency to filtrate through the Malpighian tufts.

The lack in the digestive process, whatever it may be, is not of such a nature as to produce those symptoms ordinarily associated with dyspepsia. Usually in these cases, as before said, the patient does not complain of much; there are no unusual sensations either during fasting or at any other time especially referable to the alimentary tract, no pain or feeling of distention, nausea, or flatulence, no acidity, no diarrhœa or constipation. The tongue is not unusually furred or red. If there be loss of flesh it is very gradual in its onset and progress. The defect would seem to be, as Lauder Brunton suggests, due to, in some cases, loss of the pancreatic ferment. This principle, appearing in the urine in other cases, it might be due to its production in insufficient quantities, or to its being of an inferior quality.

Explain it as we can, the fact remains the same, that one kind of albumen will pass through an animal membrane while another will not do so. And so one kind will pass through the vessels of the kidney, whilst to another variety those same vessels are quite impervious. That this is so is proved, apart from physical experiments, by the fact of these post-cibal albuminurias, the blood passing through the renal vessel always containing albumen, but the renal secretion only containing it at stated intervals, viz., when, as the result of an imperfect digestive process in the alimentary tract or subsequent imperfect oxidizing changes, the blood stream contains, besides the constantly present normal serum albumen, an inconstant and abnormal form of the same substance. The most feasible explanation of this passage is that the molecule of the different albumens is of a different size, so that, in one instance, it can pass through the filtering membrane, while in another it cannot do so. Moritz Traube has shown that the passage of substances in solution is very like the passage of powdered matters through a sieve: when the particles of the substance are too large to pass through the meshes of the sieve they are retained, but when they are sufficiently small they pass through. There is one well-known exception to the general law of Graham with regard to the diffusion of crystalloids and colloids, viz., that the crystalloid colouring matter of the blood hæmaglobin does not diffuse. The explanation of this curious exception is that the molecular weight of this body is higher than that of other crystallines, and that, consequently, the size of the molecule of hæmaglobin is too large to obey the general rule of crystalloids, and cannot therefore pass through the pores of the filtering membrane. Here we seem to have at stated times in the blood, viz., immediately after meals, a form of albumen of which the molecules are so small that they can pass through the membrane of the glomeruli.

Fürbringer, in his paper on "Albuminuria with Healthy Kidneys," *Zeitsch. für Klinische Med.*, Band i., explained its presence in the urine not by any alteration of the blood plasma, but rather by an unusual permeability of the walls of the glomeruli. But though the kidneys are certainly healthy, here, in this digestive albuminuria, it is not the glomerular membrane, a constant feature which is at fault, but the blood plasma, an inconstant one, which must be implicated. From the previously quoted experiments of Runeberg, it was found that, other conditions being the same, the amount of albumen in the filtrate varied with the nature of the albumen; and that albumen once filtered, filtered a second time with still greater facility, as though its passage through a membrane once had in some way altered the albumen molecule, and so rendered its subsequent passage more easy.

The same author also arrived at the conclusion that the so-called albuminous solutions are merely emulsions, more or less finely subdivided, the diffusibility of the particles of albumen varying according to the form of albumen present.

If I again make an allusion to these conclusions which have already been given, it is because they seem capable of explaining in great measure the existence of these forms of albuminuria. They explain them by the presence, at different moments, in the blood current, of different forms of albumen having different degrees of diffusibility.

In conclusion, I think that it is evident that we must class these cases of intermittent albuminuria amongst the "albuminuries hématogènes."

Prognosis.—Though the prognosis in these cases is favourable, and we are certainly justified in telling our patients that they will certainly recover with care, still it is equally certain that the presence of albumen in the urine, even when only intermittent, is not to be regarded lightly, and passed over as of no importance apart from the loss to the system which the constant daily though intermittent drain of albumen must be. But granting that the mere loss of the albumen is an unimportant point, its daily passage through the renal filter can by no means be so considered. If Pavy found the constant passage of sugar through the kidneys produced a structural alteration, it is probable that that of albumen might have a similar effect.

If albuminuria be produced artificially in a dog, and the kidney on being extracted from the animal be immediately thrown into boiling water, coagulated albumen is found distending the glomeruli, and also, to a certain extent, the tubules; but whereas the epithelium of the tubuli contorti is intact, that of the glomeruli is altered and thickened in appearance. The glomeruli being the seat of the transudation of albumen, it is inferred that this alteration in the glomerular epithelium is a commencing disorganization. But it does not at all follow that such is the case; the kidney being boiled during the transudation of the albumen through the pores of the glomerular epithelium, it is but natural that the coagulation of the albumen in those pores should produce a thickening and altered appearance, like the so-called cloudy swelling that is seen in commencing inflammations.

Still, if the transitory passage of albumen did not produce any serious alteration in the kidney, it is to be feared that the constant employment of the renal filter for an abnormal process would in the end give rise to more or less organic changes in that organ, and, as a result, chronic Bright's disease supervenes where a mere functional derangement had commenced. In the view of such a possibility, the immediate arrest of the flow of albumen should be our object. This intermittent form of albuminuria has been called by some physiological, as it is unassociated with any apparent pathological change. It cannot be strictly considered as physiologic, and if not classed amongst morbid conditions, should be regarded as constituting an imminence morbide.

The treatment should be here strictly rational. This condition seems dependent on some defect in nutrition, either in the preliminary changes the food undergoes in the alimentary tract to render it fit for absorption, or in some more ultimate change which should render it fit for assimilation, or it is due to a combination of both these. Hence the lines of treatment are fairly well defined, and should be those which modify the nutrition. Amongst the drugs which are most useful are those classed by M. Rabuteau with "les excitateurs de l'hematose," and which, by their known effect in increasing the amount of urea, uric acid, and carbonic acid excreted, and in raising the temperature, were found to excite nutrition. Here come oxygen, iron, the hypophosphites, and the chlorides.

Oxygen is best administered by a general and careful attention to the rules of hygiene. Those cases which have become anæmic and lowered in health by too close attention to work or study, never mind of what nature it be, or who have been living in badly-ventilated, unwholesome habitations, or who have lived upon insufficient and unsuitable food, or who, in other words, are suffering from what M. Bouchardal has so well called "la misère physiologique," should at once place themselves in conditions entirely the opposite of those in which they formerly lived. Inhalation of oxygen has been found to diminish the amount of albumen in albuminurics, and even to make it entirely disappear; but living in a pure atmosphere and under better general conditions will probably do more in these cases than the mere inhalation of oxygen.

Iron is of undoubted use, and should be given in such forms as do not interfere with digestion. I have used myself with benefit the citrate of iron and quinine, getting in addition to the action of the iron the eupeptic action of quinine.

The chlorides should be useful, particularly the chloride of sodium, in addition to the exciting action it has upon nutrition, in increasing organic combustion and the amount of urea and uric acid excreted; its presence or absence in the blood seems to have a decided action upon the elimination of albumen. Wundt found that on the third day of a diet from which salt was excluded his urine became albuminous.

Hartner also, on injecting pure water into the vessels, obtained albuminuria, which did not appear on using under the same conditions a solution of salt. According to Heller, there is a relation between the appearance of albuminuria in pneumonia and the disposition of chloride of sodium in the urine, due probably to molecular modifications in the albumen of the blood.

M. Stockvis has denied that an impoverished condition of the blood in salt produces albuminuria, as he submitted himself and animals to an alimentation poor in chloride of sodium, and so produced a diminution of salt in the blood, but never any albuminuria. But still this negative result does not entirely invalidate the positive one of Wundt, which proves that the diminution of salt does at least produce albumen in the urine sometimes.

M. Jaccoud gives it in the albuminuria of Bright's disease in doses of from 4 to 8 grammes daily.

The hypophosphites would probably be very useful here too.

Arsenic is a remedy which, from its action on the nutrition (although not an excitor), has been generally employed in albuminuria. It is strongly recommended by M. Jaccoud and M. Semmola, and also by Lauder Brunton in a paper in the *Practitioner*, 1877, entitled "The Action of Arsenic upon Albuminuria." As the oxaluria is such a prominent symptom, it should receive some attention in the treatment; and that which was found most efficacious by Dr Begbie was the administration of the mineral acids, chiefly a mixture of dilute nitric and hydrochloric acids, especially the latter, which has a decided action in aiding the digestion. But as this oxaluria is probably due to an insufficient combustion of sugar, the medicines previously mentioned will be also indicated for this symptom. Avoid an over-indulgence in sweets.

In addition to the medicinal is the no less important general and dietetic treatment. Give the patient only those things to eat which are considered easily digested and assimilated. White meats—fish, vegetables; avoiding those, such as rhubarb, tomatoes, oseille, which contain a large amount of oxalate of lime. Above all in value is the milk diet.

Aid the action of the skin, while at the same time protecting it from the contact of cold as far as possible by wearing flannel vests and a flannel band round the lumbar region. Avoid too cold baths, as tending to produce a congestion of the kidneys. Their action in producing albuminuria is shown by some cases reported by Dr Johnson in *British Medical Journal*, 1873, and by Dr Mahomed.

Considering this condition as constituting an imminence morbid, and thus rendering the patient more than usually liable to the contraction of some kidney disease, it is advisable, at least so long as the albuminuria lasts, to avoid damp, cold climates, or places subject to sudden changes of temperature. If the patient's means allow of it, send him to some warm, dry, equable climate, or on a long sea voyage to a warm clime. One case derived considerable benefit from a voyage to Australia and back, although such a procedure precludes any strict dieting, such, for example, as the milk diet.

Résumé.—In sum, then, I think we may come to the following conclusions:—

(1.) That we have here a true albuminurie hématogène,—in this sense, that it is produced by an alteration of the blood plasma, and not by an alteration of the renal organs, or of the blood pressure.

(2.) That this alteration of the blood plasma is intermittent, and can be traced to an introduction into the circulatory current of an imperfect form of albumen.

(3.) That this imperfect form of albumen results from a defective digestive process, as it occurs only during digestion, but what this defect consists in is at present doubtful.

(4.) That this intermittent digestive albuminuria is not associated with any organic lesion of the kidney, or with any renal alteration whatever of even a transient nature. But that whether this condition may lead up to an ultimate change in the kidney, if not checked by appropriate treatment, is a question of grave importance.

(5.) That the prognosis in these cases is favourable, always supposing that they are not neglected, and that an appropriate treatment is carried out.

(6.) That the treatment should consist in the exhibition of those drugs which increase organic combustion. Iron, the chlorides, hypophosphites, etc. A thorough change of air and entire rest from work and all mental worry; also a carefully regulated diet.

VIII.—THE TREATMENT OF PHTHISIS.

By F. P. Atkinson, M.D.

No one, I think, can question the fact, that the treatment of phthisis has undergone a marked change for the better during the last twenty or thirty years. The cause of the disease is now more considered than the symptoms—specific treatment is abandoned—and residence is recommended in those climates which are most likely to increase the appetite, improve the character of the blood, and promote a healthy interchange of tissue.

Even during the continuance of winter, so long as the wind is in the south or west, gentle out-of-door exercise is preferred to confinement in-doors, and in many cases the dry, cold, bracing air of the Engadine to the warm, relaxing air of the Riviera. There can be no doubt that it would be a great advantage were all persons suffering from phthisis able to be treated in the climates most suitable to their particular case; but this, from various causes, is impossible, and we have to see what means we have at command for bringing about that improvement in health which is necessary in order to effect a cure.

First, then, I would say, it appears to me of little or no consequence what form of phthisis we are called upon to treat, and that the following remedies will be found suitable, with slight alteration, to all stages of the disease. Give, syrup of the lactophosphate of lime and iron, 1 drachm (concent.); tincture of nux vomica, 5 minims; tincture of calumba, 15 or 20 minims, with a little essence of lemon and water to the ounce, three times a day. A teaspoonful of pancreatic emulsion carefully mixed with water, or a teaspoonful of Lœflund's condensed cream emulsion, or half a pint of koumiss once or twice a day. If the appetite is bad to start with, keep the patient well supported with Brand's essence of beef, or, better still, Valentine's meat juice, and milk; and if stimulant is necessary, give half a sherry glassful of St Raphael wine twice a day. Paint the chest morning and evening with tincture of iodine till sore, then omit for a time, and afterwards commence the painting again. If there is much sweating at night, inject a hundredth part of a grain of atropia subcutaneously, or, especially if the cough is very troublesome, give 10 grains of Dover's powder at bedtime. In the commencement of an acute attack, or when any outburst of pyrexia occurs, it may be necessary to give large doses of quinine and digitalis (as much, for instance, as 2 grains of the former and 5 or 7 minims of the tincture every two hours) in order to bring down the temperature; but still it must be remembered that treatment to be successful must be directed towards a general increase of nutrition. This holds good whether phthisis be proved to be due to germs or not. If there is much hæmoptysis, give either some hazeline or acetate of lead and opium. When vomiting has been a very urgent symptom, I have now and then found Dr Hughes Bennett's treatment of great service, viz., 10 minims of medicinal naphtha, 1 drachm of the compound tincture of cardamoms and camphor mixture to the ounce, to be taken every four hours.

In most cases I have been able to get on very well without inhalations, but have no doubt they might here and there—such as, for instance, where there are very large cavities—prove of very great service. It is astonishing how many really bad cases improve under the above method of treatment; but it is, unfortunately, not altogether suited to the poor on account of the expense which it involves, yet even they, with continued use of the lactophosphates, not unfrequently undergo very material improvement. I consider the lactophosphates in every way preferable to the hypophosphites; and there can be no doubt we are deeply indebted to Dr Dusart for such useful and extremely pleasant remedies. As he says, "They act as excitants of all the nutritive functions, ensure digestion, bring back or increase the appetite, and generally improve the vital energies."

IX.—GRAM'S METHOD OF STAINING APPLIED TO THE EXAMINATION OF THE MICRO-ORGANISMS IN PNEUMONIC AND TUBERCULOUS SPUTUM.

By M. Afanassiew, M.D. (St Pet.), etc., Holder of the Villier's Travelling Scholarship (St Petersburg).

Following the discovery of a micrococcus in the tissue of the lung in croupous pneumonia (Klebs,[1] Eberth,[2] Koch,[3] and notably Friedländer[4]), there appeared, about the middle of last year, some investigations which demonstrated the presence of the same coccus in the sputum of pneumonic patients (Ziehl,[5] Matray,[6] George Giles,[7] Salvioli and Zäslein,[8] and Mendelsohn[9]). That these micrococci were micrococci peculiar to pneumonia, and not adventitious or peculiar to any other disease, the above-mentioned authors concluded from their form, from their general appearance, and from the nature of their distribution. Nevertheless, the most competent judge in this question, C. Friedländer,[10] who himself examined the sputum of a very large number of pneumonic patients, paid no attention to these investigations, especially because similar micrococci can be found in the mouth, pharynx, trachea, bronchi, and usually in sputum.

Shortly afterwards Günther,[11] and then more fully and exactly Friedländer,[12] attempted to show that the presence of a peculiar mucous capsule round these micrococci is characteristic of the micrococcus of pneumonia. These encapsuled micrococci were found by Günther in the exudation of the inflamed lung taken by aspiration from the patient during life, and by Friedländer in the exudation after death. Immediately after, Ziehl[13] and Lichtheim[14] hastened to communicate that they had succeeded in finding the same encapsuled micrococcus in the sputum of pneumonic patients. Ziehl also added, that the demonstration of this micrococcus in the sputum has not only an etiological, but also a diagnostic importance; as, for instance, in cases of pneumonia, where the physical examination does not give positive results, and where the sputum is not yet rusty or is no longer rusty. However, a few months ago Fränkel,[1] from the clinique of Professor Leyden, showed that other schizomycetes may have similar mucous capsules; for instance, the sepsis-micrococci from the mouth. Friedländer,[2] it seems, agrees with Fränkel; because, in the last (2nd) edition of his *Microscopische Technik*, he advises caution in using this as a help to diagnosis.

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[1] Klebs, "Beiträge zur Kenntniss der pathogenen Schistomyceten," *Arch. f. Experim. Pathol.*, Bd. iv., 1877, p. 418.

[2] Eberth, "Zur Kenntniss der mykotischen Processe," *Arch. f. Klinische Medic.*, Bd. xxviii., 1881, pp. 1–42.

[3] Koch, "Zur Untersuchung von pathogen. Organismen," *Mittheilung. des Kaiserlich. Gesundheitsamtes*, Bd. i. pp. 1–49.

[4] Friedländer, "Ueber die Schizomyceten bei der acut. fibrin. Pneumonie," *Virch. Arch.*, Bd. lxxxvii., p. 319.

[5] Ziehl, "Ueber das Vorkommen der Pneumonikokken im. pneumonischen Sputum," *Centralb. f. Med. Wissensch.*, 1883, No. 25.

[6] Matray, "Ueber Pneumonikokken," *Wiener Med. Presse*, 1883, Nos. 23, 24.

[7] George Giles, "On the Pathogenesis of Pneumonia," *Brit. Med. Jour.*, 7th July 1883.

[8] Salvioli and Zäslein, "Ueber den Mikrokokkus und die Pathogenese der crouposer Pneumonie," *Centralb. f. die Med. Wissensch.*, 1883, No. 41.

[9] Mendelsohn, "Die infectiöse Natur der Pneumonie," *Zeitsch. f. Klin. Med.*, 1884, Bd. vii. p. 206.

[10] Friedländer, *Fortschr. der Medicin.*, 1883, No. 14, p. 471, review of articles by Dr Matray and Ziehl.

[11] Günther, *Sitzungsberichte des Vereins f. inn. Med.*, Berlin, 20th November 1882.

[12] Friedländer, "Die Micrococcen der Pneumonie," *Fortschritte der Medicin.*, 1883, No. 22.

[13] Ziehl, "Ueber den Nachweis der Pneumonikokken im. Sputum," *Centralb. f. die Med. Wissensch.*, 1884, No. 7.

[14] Lichtheim, *Fortschr. der Medicin.*, 1884, No. 3, review of Dr Mendelsohn's article.

Such is the present state of opinion as to the micrococcus of pneumonia in sputum, and it cannot therefore be regarded as settled. The cause of this lies certainly in the fact, that we have not at present a method of staining which will serve to distinguish the micrococcus of pneumonia from other micrococci,—the bacillus tuberculosus being as yet the only micro-organism which we can detect by such a characteristic colour reaction.

While working at the micrococcus of pneumonia in Paris,[3] I became acquainted with the advantages of Gram's method of staining schizomycetes, and at once determined to apply it to the examination of sputum, hoping by its use to be enabled to distinguish this micrococcus from others. By Gram's method, as lately published,[4] we can obtain microscopic preparations in which the micro-organisms alone are stained, the surrounding tissues, including the nuclei, being decolorized.

Coming to Edinburgh in June, I was enabled, through the very great kindness of Professors Fraser, Grainger Stewart, Greenfield, and Dr Brakenridge, to examine, within a comparatively short time, seven cases of croupous pneumonia in various stages of the disease, as well as the sputum from three other cases, which had been spread on cover glasses and afterwards dried and kept by Dr Stacey Wilson, and which he very kindly gave to me.

Before detailing my results, I shall first give an account of my method of obtaining and staining the sputum. The patient was first asked to wash his mouth and gargle his throat repeatedly with weak Condy's fluid and afterwards with distilled water, and then to cough, taking care that the sputum was brought up from the lung and not from the pharynx or mouth. The sputum was received into a carefully disinfected glass, and was immediately examined.

If the sputum was characteristically rusty, a small rusty portion was separated from the rest with thoroughly disinfected instruments, and spread upon cover glasses in the usual manner, being afterwards dried first in the air and then at a gentle heat over the spirit-lamp. The heat applied must be very gentle, as otherwise the micrococci stain badly.

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[1] Fränkel, "Verhandlungen des III. Congr. f. innere Medicin in Berlin." *Vide* account in *Berlin Klin. Wochensch.* or *Deutsche Med. Wochensch.*, May 1884.

[2] Friedländer, *Microscopische Technik.*, 1884, p. 100.

[3] M. Afanassiew, "Note sur les micrococci de la pneumonie franche," *Compt. rend. hebdom. des séances de la Société de Biologie.*, 1884, No. 22.

[4] Gram, "Ueber die isolirte Färbung der Schizomyceten in Schnitt und Trockenpräparaten," *Fortsch. der Medicin.*, 1884, No. 6.

In examining sputum, the modifications of Gram's method, which I found necessary, are as follows:—

1. Instead of gentian violet I used methyl violet, prepared according to Ehrlich's method—

Sat. alcoholic solut. methyl violet, . .	12 c.c.
Aniline water, ...	100 c.c.

2. In the subsequent treatment of the specimen, I used a solution of iodine in iodide of potassium, of the following strength—

Potass. iodide, ...	5
Distilled water, ...	100
Pure iodine, as much as is sufficient to colour the solution brown, about	0·1

The value of this solution was first discovered accidentally by Gram; but neither he nor Friedländer give any explanation of its mode of action. In the absence of more exact chemical knowledge on the subject, we can only say that iodine, probably by virtue of its already known affinity for micrococci,[1] tends to fix in them other staining agents, so that, when washed in absolute alcohol, the micrococci do not so easily undergo decolorisation as the surrounding tissues do.

3. I always used double coloration, viz., after the specimen had been steeped in solutions 1 and 2 (about 2–5 min. in each), it was transferred for a few seconds to ½–1 per cent. alcoholic solution of eosine. The eosine quickly begins to displace the methyl violet; and as soon as this is nearly accomplished, the cover glass is transferred to absolute alcohol, in which the superfluous eosine and nearly all methyl violet disappear, so that only the micrococci remain stained with methyl violet and the other elements of the sputum are faintly coloured with eosine. I have found by experience that, to obtain well-stained micrococci, it is necessary to effect the decoloration rapidly and to use pure alcohol, and to change the latter several times during the decolorizing process.

4. The cover glass is then quickly allowed to dry in the air, and at once mounted in Canada balsam (without oil of cloves). I prefer the balsam pure or dissolved in xylol or benzole, but not in chloroform, as the last tends to remove the methyl violet stain from the micrococci. For the same reason the use of clove oil is also avoided. For any other details as to the method of staining I must refer the reader to Gram's own account of his method.

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[1] Nothnagel, "Die normal in den menschlichen Darmentleerungen vorkommenden niedersten (pflanzlichen) organismen," *Zeitsch. f. Klin. Medicin.*, Bd. iii. p. 275.

I have felt obliged to describe my application of Gram's method somewhat minutely, as I am aware that many other investigators, following his directions exactly, have not been able to obtain satisfactory results.

On staining any sputum according to this method, we get the various elements differently stained, and thus can clearly differentiate between them,—the general field (mucus, fibrin, etc.) is of a light rose colour, the red and white blood corpuscles, epithelial cells, and often the nuclei, are of a deeper hue, while the micro-organisms (cocci, bacilli, threads, spiro-chaete, etc.) are deep blue or violet. Thus, if the micrococci are contained in the epithelial or other cells, we can distinguish them individually from the protoplasm of the cell by their peculiar colour, and, if desired, can count them.

By this method, and taking the precautions previously described in collecting the sputum for examination, I was enabled to obtain the following results:—

1. In pneumonic sputum from the fourth (I never had the opportunity of examining it earlier) till the seventh day, there were constantly present large numbers of the oval micrococcus of Friedländer, described by me in a former paper as micrococcus, No. 3. Sometimes it is accompanied by a smaller round micrococcus, designated by me as No. 2. Perhaps these constitute different stages in the development of the same organism. I have never detected bacilli, nor any other kind of micro-organisms, in such sputum.

2. The micrococci are distributed evenly throughout the field in the mucus, and are never found in masses. Usually they are diplococci, and sometimes are arranged in chains of four to eight, the space between each diplococcus being clearly visible.

3. Very often the diplococci are embedded in leucocytes, in numbers varying from two to sixteen; but in much larger numbers in epithelial-like round or oval cells, two or three times larger than the leucocytes. The nature of these epithelial-like cells has been the subject of much investigation. Buhl, Guttmann, and Smidt,[1] Bozzolo and Graziadei,[2] Bizzozero,[3] holding that they are derived from the alveoli of the lungs, with which opinion I agree, while Fischl, Heitler, Senator,[4] and Panizza,[5] assert that they are derived from the trachea and bronchi. They are sometimes present in healthy sputum in small numbers, but in pneumonic sputum in

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[1] Guttmann and Smidt, "Ueber Vorkommen und Bedeutung der Lungenalveolar-epithelien in den Sputis," *Zeitsch. f. Klin. Med.*, Bd. iii. pp. 124-138, 1881.

[2] Bozzolo et Graziadei, *Arch. Ital. de Biologie*, 1883, t. iii.

[3] Bizzozero, "Ueber die diagnostische Bedeutung der Lungenalveolar-Epithelien in Sputum," *Centralb. f. die Med. Wissenschef.*, 1881, No. 34, p. 529.

[4] Senator, *Berliner Klin. Wochensch.*, 1881, No. 25.

[5] Panizza, *Deutsch. Arch. f. Klin. Med.*, 1881.

much larger numbers, usually filled with brown pigment, and I have also detected micrococci in them in pneumonic sputum.

These results will be readily understood by any one who has examined the micrococci in a properly stained section of a lung affected with croupous pneumonia. In such a section the micrococci are seen in large numbers lying in the leucocytes and swollen shed epithelial cells, and also between the fibrin filaments in the alveoli, as well as in the leucocytes of the lymph spaces. It is this mass which is expectorated along with the mucus, etc., and when spread out in a thin layer on a cover glass, the micrococci and the cells containing them assume the scattered distribution which I have just described.

4. There were always present capsuled and non-capsuled micrococci in varying proportion, but the number of the former was always greater in pneumonic than in any other sputum. These capsules were stained in the following manner:—The cover glass with the sputum was immersed for 1–1½ minutes in Ehrlich's stain, rapidly washed in distilled water, and examined either immediately or after being dried and mounted in Canada balsam. The layer of sputum must be very thin, and the coloration not too deep.

5. In a micrococcus of one micro-millimetre in length, the diameter of the capsule varied from 4–6 micro-millimetres. I speak only of those capsules which are capable of being stained, and which were described by Friedländer, those described by other writers as not stainable being probably produced artificially. Although I have repeatedly looked for it, I must confess that I have never been able to discover a capsule enclosing a larger number of micrococci than two.

6. At the crisis and immediately after, the number of micrococci decreases very rapidly and markedly. For instance, on the third day after crises only two or three diplococci can be made out in each field, and shortly after they are found to disappear entirely.

7. In proof of the fact, that only one or at most two species of micrococcus are present, I made cultivations with the sputum[1] in sterilized peptone-gelatin. From the very first in many of the tubes there was obtained a quite pure cultivation consisting of the oval micrococcus. In only a very few of the tubes did there occur liquefaction of the peptone-gelatin or an admixture of other micrococci or bacilli. These cultivations[2] differed in almost no respect from the cultivations of micrococcus No. 3, which I made

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[1] It is very difficult to make cultivations with pneumonic sputum, as it adheres badly to the platinum needle, and hence sometimes the puncture remains sterile. It is necessary, therefore, in order to make sure of a successful cultivation, to see that a small portion of sputum is really attached to the needle.

[2] These cultivations I have given to Dr Woodhead, senior-assistant to Professor Greenfield, who intends to make inoculation experiments with them.

in Paris, in the laboratory of Professor Cornil, with exudation from a croupous pneumonic lung.

8. Whenever I took a specimen of sputum without the precautions formerly described, I found in it a great variety of schizomycetes,—different cocci in form of monococci, diplococci, in chains of different lengths (in sarcinæform, in dominoform, in zoogloea masses; bacilli of different length and thickness); filaments of leptothrix buccalis; yeast cells and spores; and, finally, spirochaete and others. This great variety depends, no doubt, on a mixture of the secretions of the mouth and throat; in confirmation of which is the fact, that there were always present the very large epithelial cells of the mouth and the characteristic pavement epithelial cells with processes, from the throat. Both kinds of cells are often almost covered with a very small micrococcus, which is usually in the form of diplococcus, and which bears a close resemblance to a short bacillus.

Among these various forms of schizomycetes are also found micrococci quite similar in form to the micrococci of pneumonia; and it is impossible to distinguish the one from the other by means of the microscope, the only difference being that the former are usually distributed in masses. It is quite possible that they are the micrococci of pneumonia, however; and if we bear in mind these facts, viz., that the croupous pneumonia is parasitic in origin, that it occurs everywhere, that the pathogenity of the micrococcus of pneumonia is not strong;[1] and that different predisposing conditions, such as previous disease, cold, childhood, old age, and other debilitating causes, such as severe physical labour with insufficient nourishment, etc., play an important *rôle* in the production of the disease, we can find nothing in them to contradict the assumption, that the micrococcus of pneumonia may be present in small quantity in the buccal cavity of healthy people.

In conclusion, I have found that microscopic examination of the blood in three cases, by the above and other methods of staining, gave negative results. In two of these cases I also attempted to make cultivations with the blood in peptone-gelatin; but here, too, without result. But in the blood, drawn on the ninth day of a very severe case of pleuropneumonia, there were found, on careful examination, diplococci in very small quantity, the method of staining used being the same as described in section 4. I unfortunately was unable to make a cultivation of this blood in peptone-gelatin. Friedländer,[2] in his last paper on the subject, states that out of six cases of pneumonia, in which he attempted to make cultivations from the blood, only one was successful. From the microscopic examination of the blood he always obtained negative results. How to explain the contradictory results of the Italian investigators (Marchiafava,[1] Cambria and Griffini),[2] I do not know. From these results it is clear that in uncomplicated cases of pneumonia the micrococci find a nidus only in the lung; or if they pass into the blood, do so in very small numbers. It would be very interesting to examine the blood in those cases of pneumonia which are complicated by meningitis, pericarditis, etc., *i.e.*, where the disease became general, and where, consequently, the blood must contain micrococci, if we accept the theory that these complications are produced by germs carried from the inflamed lung (Firket,[3] Jürgensen,[4] etc.)

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[1] See my above cited article in *Soc. de la Biologie*.

[2] Friedländer, "Weitere Bemekungen über Pneumonie - Micrococcen, *Fortschr. der Medicin.*, 1884, No. 10, p. 333.

As a result of this investigation, which I am still carrying on, it seems plain that the examination of the micro-organisms in sputum and blood of pneumonic patients possesses interest not only in relation to the etiology and diagnosis, but also in relation to the prognosis of the disease.

After obtaining such striking results with my modification of Gram's method in staining the micrococcus of pneumonia, it became of great interest to me to see if equally good results could be obtained with the tubercle bacillus. Gram had already observed[5] that this bacillus could be very successfully stained by his method; but from his paper it is not clear whether he stained them in sputum or in sections of the lung. According to him, it is necessary to let the specimen lie in the staining fluid for 12–24 hours; but from that description it would seem to have no special advantages over other methods (Koch, Ehrlich, Rindfleisch, Gibbes, etc.)

The object of my investigation was to shorten the time necessary for staining the bacillus, and I succeeded very easily. It is only necessary to warm the liquid in which the cover glasses lie until the steam begins to rise from it, then remove the cover glasses, allow them to cool, and afterwards manipulate as in the case of croupous pneumonia specimens.

The preparation stained in this way has a very characteristic appearance. The tubercle bacilli, stained of a deep blue colour, are distributed all over the field, sometimes separated, sometimes aggregated into small masses. The other elements of the sputum are coloured red. Inside some of the cells are often found masses of undoubted tubercle bacilli. Micrococci were very seldom found (the sputum was taken with the previously described precautions). If the same sputum be coloured by Ehrlich's method, the number of bacilli visible is much smaller, and they are not so intensely coloured; but there is no ground for supposing that the bacilli,

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[1] and [2] Cited after Salvioli and Zäslein.

[3] Firket, "Contribution à l'étude de la méningite latente chez les pneumoniques," 1880; "Nouvelle contribution à l'étude de la méningite chez les pneumoniques," 1884, *Ana. de la Soc. Médico-Chir. de Liége.*

[4] Jürgensen, "Verhand. des III. Congr. für innere Medicin in Berlin." *Vide* account in *Berl. Klin. Woch.* and *Deut. Med. Woch.*, May 1884.

[5] Gram, *l. c.*, p. 188.

Fig. 1.

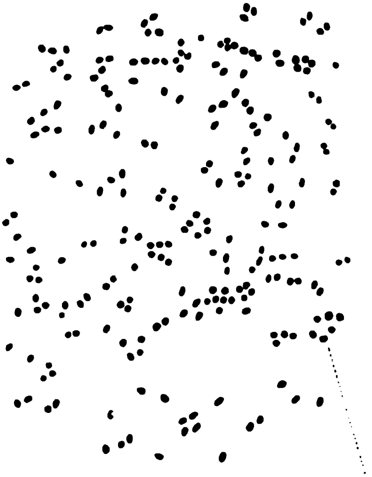


Fig. 4.

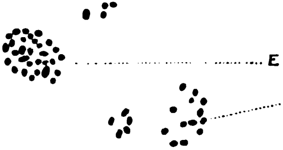


Fig. 3.

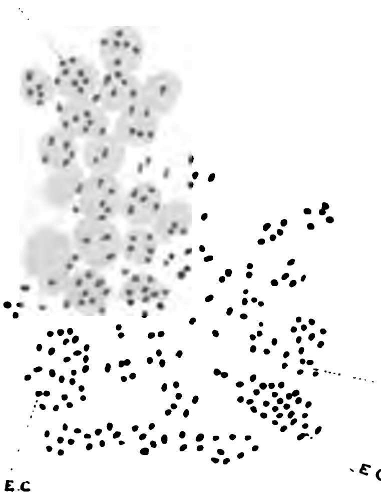


Fig. 2.

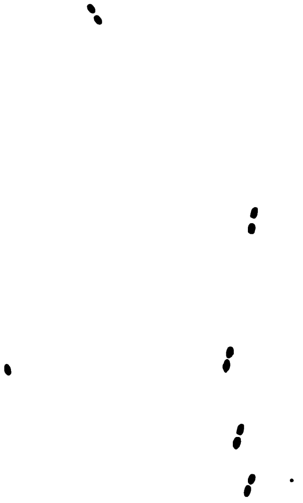
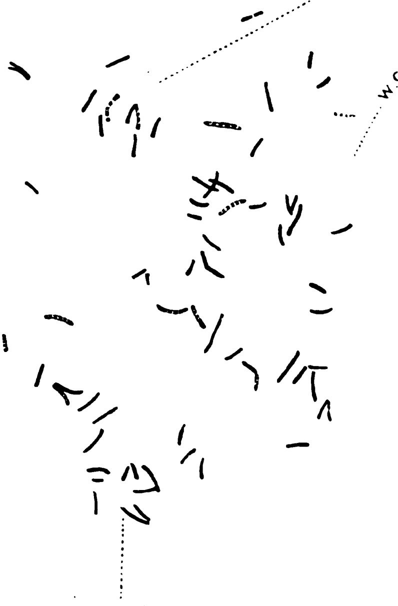


Fig. 5.



EDINBURGH MEDICAL [illegible]

which appear by Gram's method and which do not appear by Ehrlich's, are other than tubercle bacilli, for the form of the latter is characteristic and easily recognised.

I also stained sections of tuberculous lung by the same method (acute miliary tuberculosis, two cases). The staining occupied about fifteen minutes, at the end of which time the bacilli were quite blue, and the rest of the section and caseous masses red. By keeping the preparations in the fluid for a longer time, the coloration of the bacilli is more intense and more permanent. Where intensity and comparative permanency are specially desired, gentian violet is preferable to methyl violet.

This method, therefore, is specially applicable to cases where, on examination of the sputum or different organs, very few bacilli are found, and where there are doubts as to their presence. It should, however, always be controlled (at least by beginners) by Ehrlich's method, which stains only the tubercle bacilli, whereas by Gram's method all the micro-organisms present are stained.

In one case of bronchiectasis with very purulent but not fœtid sputum, and also in one case of purulent bronchitis, I found almost no micro-organisms on staining by this method. On the other hand, in one case of fœtid bronchiectasis I found large numbers of micrococci and bacilli. Examination by Ehrlich's method showed that the bacilli were not tubercle bacilli, but even without this, by their appearance alone, it was easy to decide the question.

In conclusion, therefore, we find *only* micrococci in pneumonic sputum at the height of the disease, and few micro-organisms but bacilli in tuberculous sputum. Koch[1] had observed something of the same kind in cholera. At the height of the disease the contents of the small intestine contain almost exclusively the cholera bacilli, all other micro-organisms, which usually swarm in the intestines, having disappeared, just as if they had been driven out by the cholera bacillus. It is possible that we have a similar state of affairs in the lungs in croupous pneumonia and in tuberculosis.

I have to thank Professors Fraser and Greenfield for their kindness in placing their laboratories and wards at my disposal while carrying out these investigations, and also for the assistance and advice which they have constantly and heartily given me.

All illustrations were made with Nachet's prism, and by magnifying power = 700 diam.

1. The sputum on the sixth day of pneum. croup. W. = white corpuscles. The micrococci are embedded in mucus and in leucocytes.

2. The sputum on the third day after the crisis of croupous pneumonia.

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[1] Koch, "Sechster Bericht der deutschen Cholera-Komission," *Fortschritte der Medicin.*, No. 7, p. 51, Beilage, 1884.

Illustrations 1 and 2 show the comparative quantity of micrococci in different stages of disease.

3. Micrococci in part of an alveolus. They are seen in and between leucocytes (W.) and in two swollen epithelial cells (*e.c.*) shed from the alveolar wall.

4. Epithelial cells from sputum of pneumonia. *e.c.* Epithelial cell; *w.b.c.* White blood-corpuscle.

5. Coloration of tubercle bacilli in sputum by Gram's method.

Part Second.

REVIEWS.

Leçons sur les Maladies Mentales. Par B. BALL, Professeur à la Faculté de Médecine de Paris. Paris, 1880–83.

DR BALL's forty-five lectures fill a large octavo volume of well-nigh 900 pages. In the preface the author descants, after the manner of professors, on the importance of his subject. Medical practitioners seem more and more bent to leave the study of insanity to the specialists; nevertheless, there are few questions which present themselves more frequently, and under a more menacing form, to the men who cultivate the healing art. We hope, therefore, that they will take warning, both in France and in our own island.

Dr Ball's first lecture treats of mental medicine through the ages. He tells us that it was the philosophers of the Alexandrine school who first held that the brain is the seat of the intelligence, and its disorders the cause of delirium and mania. Erasistratus, by an intuition of genius, reached the idea that the extent of the intelligence has a relation to the development of the surface of the brain. The observations of twenty-one centuries have rendered this view highly probable, so we are advancing a little.

The second lecture is on insanity in general, and then we have two excellent chapters on hallucinations. The next subjects treated are delirious conceptions and irresistible impulses, the physical condition of the insane, and the anatomical lesions of insanity. After this we have descriptions of delirium, melancholy, stupor, mania, circular insanity, and dementia, with their variations and blendings. In the sixteenth, seventeenth, and eighteenth lectures Dr Ball considers the causes of insanity, and then deals with its diagnosis, prognosis, and treatment in general. This arrangement is, in some of its details at least, unexpected. The author has now got little farther than the middle of his book. He has still to give us descriptions of religious insanity, folie de doute, epileptic, choreic, phthisical, and rheumatismal insanity. Then come toxic insanity, especially those of lead and alcohol, general paralysis, which occupies 120 pages, and idiocy and cretinism. The last chapter deals with the insane in relation to society. The professor's style is somewhat discursive, but elegant and clear, with now and then a well-weighed maxim or a sentence of epigrammatic force.

Some books get large under the hands of the author, because he does not know how to hew down or mould his materials. This is not the case with Dr Ball. His mind is comprehensive. He has made inquiries upon all questions, and his writing runs over from insanity to sanity, so that we meet with reflections upon human nature and upon human life which are sometimes striking enough.

In reviewing this book, little is left but to pay compliments; and, as our French friends will probably admit, this is a duty which one cannot expect a critic or a Briton to do gracefully. From the rich stores of his experience and of his reading Dr Ball selects the most striking and instructive illustrations of the different forms of insanity; and it would be difficult to say whether he appears to most advantage as a physician deeply learned in the symptoms and treatment of mental disorders, or as an observer of human nature. As a psychologist he obviously holds the first rank, though on some few points we are inclined to disagree with him. It is not, however, expedient to raise such questions in a purely medical journal. From the great culture and erudition of the professor, it is not easy to make a collection of the small faults which critics like to exhibit. We think Dr Ball has made a slip when he says that mirror-writing is most frequently noticed with general paralytics, and that the true cretins are not goitrous, or have this infirmity in a very slight degree. The reader will probably thank us if we finish this review by presenting a few extracts from the book translated into English. In choosing these passages we feel a kind of reproach at the remembrances of other passages equally or more profound; indeed, some of the most profound could not well be separated from the sentences which come before and after, and it is only in trying to disunite them that we perceive the close and logical sequence of ideas in the book.

"There can be no more pernicious error than to consider mental disease as a simple accident which troubles the course of existence, like an unforeseen obstacle which causes one to stumble on the road of life. No, insanity is a profound perturbation which affects the whole nature and the whole organism, and which forms the last chapter of a long history, the last halting-place of a long voyage; and if I were asked to condense all that we know of the origin of insanity, I reply, readily, 'There is but one cause of mental alienation, and that is heredity.'"

"In order to explain the outbreak of an individual trouble, we constantly mention grief, fatigue, weariness, excess; but the miseries of existence are our common heritage. Some support the burden of life without sinking, others become enfeebled beneath the load; some lose health, others reason. Whence comes this great difference? It arises from the physical heritage left us by our ancestors."

"Outside of the public and private asylums, how many cases are kept carefully concealed from the knowledge of the public, to save the shame and despair of families! Besides, there is a great number of lunatics at liberty, who quietly enjoy their civil and political rights. For my part I know of several; and you will easily find them in the circle of your personal observations."

"Whenever a complaint arises about an arbitrary confinement in an asylum, why does the public make common cause against the alienists? Because there exists a good number of lunatics at liberty who make common cause with one of their fellows."

Commenting upon the fact that very careful examinations of the brains of persons who have died insane have revealed no sensible lesion, Dr Ball remarks, that "it is one of the best established principles in the pathology of nervous disease, that the excitation of a nerve produces accidents much more serious than the paralysis or the destruction of the organ. A familiar example of this is the sympathetic action exerted by disease of one eye upon its fellow. Oculists are often obliged to remove the injured eye to save the healthy one. In such cases the total suppression of the organ causes the danger to disappear. Can one not admit that in the encephalon a group of dead cells will remain without influence on the other parts, while a dying or diseased cell will cast disorder around it?"

Lectures on Mental Disease. By W. H. O. SANKEY, M.D. Lond., F.R.C.P.; late Lecturer on Mental Diseases, University College; formerly Medical Superintendent of Female Department of the Hanwell Asylum, and President of Medico-Psychological Society, etc.; Proprietor of Boreatton Park Asylum. London: H. K. Lewis: 1884.

DR SANKEY'S lectures show a mature acquaintance with insanity, and include so many subjects that it would not require much addition to make the book a complete treatise on the subject. As might be expected from the writer's experience, he is fullest upon those parts which most frequently present themselves to the physician engaged in the treatment of insanity. There is no classification of insanity in general use, every new author proposing a new division. Dr Sankey's own arrangement is a miracle of simplicity: he has ordinary insanity, acute stage; ordinary insanity, chronic stage; recurrent insanity, varieties of ordinary insanity, general paresis, idiocy, epileptic insanity, alcoholismus, spinal cases, and organic brain diseases.

The chapter on Pathological Anatomy shows that he has worked carefully on these subjects; and even the most experienced physician might find some useful advice in the chapter on treatment. Where they embody the long experience of the author, these lectures are of value; but in seeking to give his work a greater completeness and literary finish, Dr Sankey has not been so successful. Some of his views show an original turn of mind, and are generally supported by well-chosen cases. We have been struck by the instances which he gives where general paralysis, or general paresis, as Dr Sankey prefers calling it, seemed to be produced by powerful mental impressions, "moral agony," or "nerve shock."

The chapter on Idiocy is a clear compilation from somewhat scanty materials. The following passage is perhaps the worst. Dr Sankey tells us that Mr Morel thus epitomizes the chief "antenatal causes," dividing them farther into two kinds:—

"1. Marriages of affinity. 2. Cachexia of parents, produced by—(*a*.) Diseases—as syphilis, scrofula, rickets, goitre, epilepsy, insanity, alcoholism. (*b*.) Hygienic defects—as marsh miasma, bad soil, climate, unhealthy residence, bad ventilation of workshops, mines, etc. (*c*.) Errors of food—as ergotized grain, maize, potato, rice, opium, tobacco.

"It will be seen, by reference to Dr Shuttleworth's table, that a rough division of the varieties may be made by dividing them into the diminished head or micro-cephalic idiot, and larger heads, or megalo-cephalic.

"In the micro-cephalic idiot the cranium may be, and usually is, tolerably symmetrical in form. The diminutive head may be a part of a generally stunted growth and backwardness of development. This kind of idiot is also a dwarf, and is usually deficient in vital stamina, quickly ages, and dies by decrepitude at an early date. To this form of idiot the name of cretin is applied. A cretin is thus always an idiot, but the idiot is not always a cretin."

The reader can scarcely have failed to notice the mixture of careless writing and incorrect assertion in this wonderful passage. Marriages of affinity is probably a slip for marriages of consanguinity, which have been sometimes assigned as causes of idiocy, though there is no proof of this where the parents are healthy. Goitre is rather an accompaniment of cretinism than a cause, and the morbific cause of both these affections acts directly on the child, and rarely through the parents. It by no means follows that cretins are micro-cephales; and, as a general rule, micro-cephales compared with other idiots are not destitute of stamina. The statement that climate, maize, rice, and potatoes are causes of idiocy, coming from a former President of the Medico-Psychological Association, would be alarming, if we did not suspect that Dr Sankey means something different from what he says.

Dr Sankey takes occasion to explain the many precautions with which the law surrounds the detention of a lunatic in an asylum, whether private or public. These safeguards and inspections are so numerous that we have not room for the passage, which occupies seven pages. It seems to us that the lawyers, like Baron Huddleston, have done a good deal to spread unnecessary alarm amongst the ignorant public. It is said that two medical men, combining with a third party and the proprietor of a private asylum, could imprison a patient. Leaving out of consideration the difficulties in misleading the man's friends, the different inspectors of asylums, and the attendants, who have their own opinion and cannot be kept from talking, let us admit that it *is* a dreadful state of matters that four dishonest persons, who dare the penalties of the law, can deprive a person of his liberty for an indefinite time; but how much more dreadful is the ordinary common and statute law of England! Why, four, two, or sometimes one person, who may choose to commit perjury, may get a man hanged, may get him imprisoned for life, may get his character ruined for ever, and what is more, they occasionally do so. No year passes but what we hear of innocent people being liberated after being found guilty by a jury and confined in jail for years, and even of men being hanged by mistake; whereas those who inveigh against the lunacy laws cannot produce a single case of a sane person being confined even for a few days in a British asylum. The ordinary machinery of the law is a hundred times more liable to imprison an innocent man than the Lunacy Acts to help the detention of a sane one.

Practical Pathology. By G. SIMS WOODHEAD, M.D. Second Edition. Edinburgh: Young J. Pentland: 1885.

IT is little more than a year since we were called upon to notice the first edition of this work, and were then able to speak of it in terms of commendation, pointing out, however, one or two points which to our mind seemed worthy of improvement. The volume now presented has evidently been most carefully revised, a considerable portion of it re-written, and some of the points to which we drew attention have been attended to with, we think, advantage. A complete and excellent chapter, written by Dr Milne Chapman, descriptive of the morbid conditions which occur in the organs of generation of the female has been added. The drawings throughout the volume, which are beautiful and truthful, have been increased by 26 (and now number 162), the new ones especially illustrating the minute pathological changes in the lungs and kidneys, and those occurring in the female generative organs; while some of those representing the structure of tumours have been altered and re-drawn from more typical microscopical preparations than the author probably possessed at the time his first edition went to press.

That in so short a time a second edition of such a work is required indicates the high value put upon it by the student; in fact, it is now looked upon as one of the text-books necessary to those studying the important and ever extending subject of the science of Pathology.

Clinical Lectures. By RICHARD QUAIN, F.R.S., Surgeon Extraordinary to Her Majesty the Queen, Emeritus-Professor of Clinical Surgery in University College, Consulting Surgeon to University College Hospital. With 40 Plates. London: Smith, Elder, & Co.: 1884.

THIS is a handsomely printed and lavishly illustrated volume, containing a number of clinical lectures, or rather systematic lectures on certain forms of disease, delivered on a particular case or series of cases. They contain much ripe experience, and exhibit evidence of sensible treatment. But in this age of rapidly advancing science they are terribly behind-hand. The nomenclature is obsolete, the pathology archaic, and even the practical lessons are elementary. Fancy reading in a work published in 1884 the following:—"A few years ago it was suggested by Mr Syme of Edinburgh in amputation at the ankle-joint to cover the bones of the leg from the soft parts beneath the heel, etc. . . . . The operation seems to me to be free from any valid objection" ! ! ! ! p. 49. In the treatment of hip disease we do not find anything later than Liston's long splint, and a recommendation that when pain is severe morphia may be used, p. 92.

At p. 111, we have a most judicious but not very striking or original disquisition on the advantages to be gained in some surgical cases by country air—in a change from London.

We cannot advise any student to purchase this work to help him to pass an examination, but veterans may like to read the polished periods and wise observations they used to hear in the early years of the century, while all will admire the beautiful plates which illustrate it.

The Treatment of Cancer of the Breast. By W. MITCHELL BANKS, F.R.C.S. Edinburgh: Neill & Co.: 1882.

WHEN a surgeon "gets up in the world," besides gaining experience and guineas, he not unfrequently acquires a habit of making sweeping statements, which perhaps he may not be able to substantiate. Mr Banks says, "Surgeons as a rule do not remove cancers of the breast. They persuade their patients that they do, and they almost persuade themselves." We have seen the operative procedures of many surgeons, both here and elsewhere, and we have read the pleadings of many surgeons for sweeping removals of malignant tumours, and we consequently cannot agree with Mr Banks in the above unjust accusation.

There are some things, however, in the pamphlet of Mr Banks which are well worth the careful perusal of all practical surgeons. He carefully and ably points out the risk of being too conservative in the matters of skin and glands in the removal of a cancerous mamma. First, as regards skin, Mr Banks recommends that "if any part of it is involved, then a circle should be drawn round the breast, and it should be cut clean off without the remotest regard to flaps and coverings of any kind." The utility or advisability of so extreme a measure as this we cannot see. That a considerable portion of apparently sound skin should be removed along with the portion involved in the disease is certainly necessary; but such an operation as that proposed by Mr Banks's *clean sweep* would imply to us an amount of mutilation that would necessarily negative any operation.

Again, as to the glands. We are advised to remove them *in toto*, and in every case, whether involved or not. In the matter, or rather manner, of removing the axillary glands, we consider that Mr Banks comes behind his own ideal. He speaks of "shelling them out" and of "pinching them off between the nails of the finger and thumb." Now we, who believe in removing the axillary glands completely, consider it necessary to clear out the axilla completely, including the cellular tissue, fat, and lymphatics.

Although we have accused Mr Banks of inconsistency, we strongly recommend his pamphlet as containing much common-sense and practical teaching.

A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., F.R.C.P. Two Vols. Fifth Edition. London: Smith, Elder, & Co.: 1884.

Handbook of Midwifery for Midwives. By J. E. BURTON, M.R.C.S., L.R.C.P. Lond. Second Edition. London: J. & A. Churchill: 1884.

The Handbook for Midwives. HENRY FLY SMITH, B.A., M.B. Second Edition. London: Longman, Green, & Co.: 1884.

ALL these books have been already reviewed in our pages, and it is with great pleasure that we welcome them as new editions. Dr Playfair's work is too well known and too highly appreciated to require any further notice. Suffice to say that the additions, both in letterpress and illustrations, are useful and valuable. Dr Burton's book is from the official handbook of midwifery for Prussian midwives, published by direction of the minister for spiritual, educational, and medical affairs, and in its completeness would almost form a text-book for students. It is hardly suited for the use of midwives in this country during their too short three months' course of study, but should be in the hands of, and should be read by, every midwife after she has undergone her examination. Dr Smith's work we have found to be highly appreciated by those for whom it is intended.

Practical Manual of Diseases of Women and Uterine Therapeutics for Students and Practitioners. H. MACNAUGHTON JONES, M.D., etc. London: Baillière, Tindall, & Cox: 1884.

DR MACNAUGHTON JONES has produced a book written essentially from the general practitioner's standpoint, and based upon some of the more recent standard text-books on the subject. As he has pretty closely followed them in his directions as to treatment, the tendency of the work is healthy and harmless; but as he has failed to give it any stamp of individuality, and as his authorities are within the reach of all, we fail to see the utility of his enterprise.

Materia Medica and Therapeutics: An Introduction to the Rational Treatment of Disease. By J. MITCHELL BRUCE, M.A., M.D., Lecturer on Materia Medica and Therapeutics, Charing Cross Hospital, etc., etc. London: Cassell & Company: 1884.

AMONG the many manuals of Materia Medica and Therapeutics, this one by Dr Mitchell Bruce is sure to become a favourite with students. Its size, its accuracy, and its recent date are all in its favour.

The manual is an excellent one for class purposes, and is sure to have a wide circulation. The book is not without its faults, and it would be easy to object to many things contained in the volume, as, for example, in the "Synopsis of Vegetable and Animal Products contained in the British Pharmacopœia," where the classification is anything but logical, and in which not a few mistakes occur; but notwithstanding all its faults we have much pleasure in favourably commending it to the notice of students and practitioners.

The National Dispensatory; Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognised in the Pharmacopœias of the United States, Great Britain, and Germany, with numerous references to the French Codes. By ALFRED STILLÉ, M.D., LL.D., Emeritus Professor of the Practice of Medicine, etc., in the University of Pennsylvania; and JOHN M. MAISCH, Phar. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Third Edition. London: J. & A. Churchill: 1884.

ON a previous occasion it was our privilege to notice favourably the first edition of the *National Dispensatory*, and we are glad to see that it has now reached a *third* edition.

It is a work of great merit, being one of the best, if not the very best work in the English language as a work of reference on Materia Medica and Therapeutics. It ought to find a place in every library.

Handbook for Travellers to South Africa. By A. WILMOT, F.R.G.S. Second Edition. London: Richards, Glanville, & Co.: 1884.

THIS is a pleasant little gossipy guide-book to South Africa, written by one who is evidently an enthusiast on the climatic and other virtues of the Cape Colony. The details regarding health-resorts are too meagre to render the work of any use to the medical practitioner, but the ordinary emigrant may find in it a store of information regarding routes, wages, and the modes of living, which may be of some value to him.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIV.—MEETING III.

Wednesday, 7th January 1885.—Dr LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF NEW MEMBERS.

The following gentlemen were elected Ordinary Members of the Society:—William Wilson, M.B., L.R.C.S. Ed., Edinburgh; John Mowat, M.D., Edinburgh; Skene Keith, M.B., C.M., F.R.C.S. Ed., Edinburgh; D. Nöel Paton, M.B., B.Sc., Edinburgh; George Hugh Mackay, M.B., C.M., Elgin; J. Michael Dewar, M.B., C.M., Edinburgh.

II. EXHIBITION OF PATIENTS.

1. *Mr Joseph Bell* showed a case of EXCISION OF THE ELBOW-JOINT FOR INJURY. The patient, a young man, æt. 19, got his right arm lacerated by a circular saw. The injuries were very severe, the skin on the back of the elbow being destroyed to the extent of nearly 6 inches, the bones exposed, and the joint opened into. Amputation was at first thought to be necessary, but an attempt was made to save the limb. He was at first treated in the country by Dr Kynoch of Greenlaw, and not sent in to hospital till the wound had healed. The joint had then anchylosed. There was neither pronation nor supination, and the arm was perfectly straight.

The cicatrix was thin and feeble. The lad being anxious to have more use of his arm, submitted to the operation of excision of the joint after its risks had been explained to him. The operation was a little tedious, the periosteum having to be carefully separated before the saw was applied. Thirty-five days had elapsed since its performance, but the patient had already very remarkable movement and power in the limb, perfect flexion and full voluntary extension, with both pronation and supination. An examination of the specimen showed that osseous anchylosis had occurred.

2. *Dr Duncan* showed a patient whose case illustrated the good effects of the SUBCUTANEOUS LIGATURE OF VARICOSE VEINS. His internal saphena vein had been much enlarged, and there were two huge ulcers of the leg depending on its varicose state. The ligatures were applied in six different places along the course of the vein. The patient lay five weeks in the Infirmary, during which time his ulcers healed, and the cure of the varicosity of that vein was thorough. The method of operating was to pass a needle through the skin beneath the vein, and bring it out on the other side. The needle was then threaded with catgut and withdrawn, and the catgut left in its track. It was then passed from the first point of insertion between the skin and the vein to the point of exit and unthreaded. The loop of catgut round the vein was then tied. The limb was dressed with salicylic wool, and not touched again till healed.

3. *Dr M'Bride*, through the kindness of Professor Chiene and Dr Hamilton Wylie, was enabled to show a boy, æt. 8, who was affected with OBJECTIVE TINNITUS, or, in other words, a CEPHALIC MURMUR. It was heard loudest over the left temporal bone, was continuous, while at each systole of the heart it rose into a whistling note, and had thus the characteristics of the murmur of arterio-venous aneurism. From its being remote from the auscultating ear, he considered it due to some vascular change within the cranium, and probably to an arterio-venous aneurism between the carotid and the cavernous sinus. The report of the ophthalmic surgeon that there was congestion of the left optic disk, and not of the right, strengthened this view. The history of the case was that some weeks previously the boy had fallen on his head, become insensible, and shown symptoms pointing to fracture of the base of the skull. On his return to consciousness this murmur was present, and was both objective and subjective. Dr M'Bride fancied that it was difficult to come to any other conclusion than that it was due to arterio-venous aneurism. It was always stopped when the common carotid was compressed.

III. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Dr Craig* showed a specimen of SARCOMA OF THE RIBS, LIVER,

AND LUNGS. The disease had affected the fifth, sixth, and seventh rib of the right side. It grew first on the sixth rib, and the patient, a man, æt. 44, lived about six months after Dr Craig's attention was first drawn to it. It was then not much larger than a small bean. He showed it partly on account of the difficulty of diagnosis, because although seen by several distinguished members of the profession, the opinions as to its nature varied considerably. His first suspicions of malignancy were aroused by the fact of the man's losing flesh rapidly without anything else to account for it. The tumour was about the size of a small orange, and projected not quite so far into pleural cavity as outwards. It was not adherent to the pleura. Secondary deposits occurred throughout the liver, and the lungs also showed traces of being affected. The patient had been strong and healthy, though rather addicted to alcohol, before the tumour appeared. There had been no injury so far as was known, and no instance of malignant disease in the family history.

2. *Dr James Carmichael* exhibited the BRAIN of a patient who died in the Royal Hospital for Sick Children four days after admission. The girl, aged 8 years, had suffered six months previously from a discharge from the right ear, which ceased at the end of a fortnight. She remained well until three weeks before admission, when she became ill, and the otorrhœa again made its appearance. Dr Cadell saw the child and evacuated an abscess over the mastoid process behind the ear. Serious symptoms having supervened, the child was sent into Hospital. When admitted she was delirious, and constantly talking. On examination of her ear, a very fœtid discharge was escaping from a wound behind, and also from the meatus. There was inequality of the pupils, the right one being dilated and irresponsive. The pulse was 56, the temperature 99°; no paralysis or spasm of any muscles. The child continued much in this state for two days, and then became comatose. Mr Annandale kindly saw her with me, and it was agreed, as the child was in a hopeless state, to give her a possible chance of relief by opening the skull over the affected part, in case there should be any accumulation of pus within the cranial cavity. The mastoid process of the temporal bone being carious, the bone was gouged away until the membranes could be felt. During the operation some pus escaped, but in pushing a trocar and canula through the dura mater there was no further escape of matter. The child was then put to bed, and seemed to regain sensibility to a slight extent, so as to be able to swallow a little food. She, however, soon relapsed into a helplessly comatose condition, and died the following day. On post-mortem examination, when the skull cap was removed, about an ounce and a half of pus escaped from between the bone and the dura mater. Between the brain itself and membranes a considerable quantity of serous fluid was

found, but no pus. A rugged opening in the dura mater was found over the petrous portion of the temporal bone, opposite which, when the brain was removed, a small opening was discovered in the cerebral substance over the lower and anterior part of the temporo-sphenoidal lobe. From this opening serous-looking fluid was escaping, apparently from the lateral ventricle on this side. The cerebral substance over this portion of the brain was sodden and gangrenous looking. On enlarging the aperture it was found that it led into a gangrenous abscess cavity about the size of 2 inches by 1½. The brain's tissue between this and the lateral ventricle was soft, greenish, and gangrenous looking. The case was one by no means uncommon, and showed the ultimate danger in cases of otitis in children, and the need of early care and treatment in affections of this sort.

3. *Dr MacGillivray* showed for Mr Chiene a TUMOUR INVOLVING PART OF THE ŒSOPHAGUS, PHARYNX, AND LARYNX, removed from the patient shown at the previous meeting of the Society. Œsophagostomy had been performed and the patient sent home, to see if she gained flesh before the removal of the tumour was attempted. She returned to hospital in a few days on account of difficulty of breathing which had occurred. Mr Chiene proposed tracheotomy, but she refused to submit to anything, unless an attempt was also made to remove the disease. The dangers were explained to her, but she determined to take the risk. Tracheotomy was first performed below the cricoid cartilage. The incision for the œsophagostomy was reopened and extended upwards, the sterno-mastoid and vessels turned aside, the œsophagus cut across, and the lower end stitched to the skin. The upper portion was then separated from the trachea and the bodies of the vertebræ, along with the posterior and lateral parts of the pharynx, which were involved. The box of the larynx was then found to be affected, and was removed by an incision carried along the hyoid bone from the top of the incision made for the removal of the œsophagus. The tracheal wound was then stitched to the skin. The condition of the patient was not quite satisfactory since the operation, a pneumonia having occurred, probably from some discharge having got into the trachea, and passed down into the lung.

4. *Dr Kirk Duncanson* showed (*a.*) A SARCOMA OF THE HARD PALATE removed after the parts had been three times within ten minutes well painted over with a 20 per cent. solution of hydrochlorate of cocaine. The patient felt no pain until at the end of the operation, when, as the root of the tumour was being cut out, he experienced pain. Dr Woodhead reported the tumour to be a round-celled sarcoma, with myxomatous degeneration. (*b.*) Specimens of OTO-MYCOSIS, the fungus disease of the ear; cultivations and microscopic preparations, also micrococci from a case of furuncle of the external auditory meatus.

5. *The President* showed (*a*.) a STOMACH presenting two perforating ulcers, evidently of some standing. These ulcers were nearly opposite each other at the middle of the viscus. The interest of the case lay in the absence of symptoms of such a serious disease and in the rapidity of the death. There was no history of stomach disease. Deceased was of intemperate habits, and the day before her death was going about her usual household duties. She suddenly complained of pain in the abdomen, and rapidly sank with the symptoms of general peritonitis. Behind the stomach, but not attached to it, was a circular tumour the size of a hen's egg, which, on section, showed a structure resembling encephaloid. (*b*.) A PORTION OF THE ILEUM from a typhoid patient. There were two perforating ulcers in close proximity. The patient was in the City Hospital from 18th to 28th December, and was progressing favourably, when a sudden relapse occurred, and death took place in three hours.

IV.—ORIGINAL COMMUNICATIONS.

1. *Professor Annandale* read his paper on SOME INJURIES IMPLICATING THE ELBOW-JOINT, which appears at page 681 of this Journal.

Dr Hare asked, with regard to the treatment of cases of dislocation of the elbow backwards, whether it would not be well to commence passive movement before twelve days had elapsed. It struck him on seeing the specimens that one was running a considerable risk in leaving the elbow at rest for so long a period. Adhesions might occur which would render the arm less useful. There was one other point in regard to the interesting case of fracture of the neck of the radius. The treatment in a case of that sort must always be a matter of some difficulty. The forearm, he understood, was fixed midway between supination and pronation. Would this bring the fragments of bone into their proper relation? The shaft of the radius would be apt to pass somewhat into the position of pronation. Would it not be preferable to put the arm in a position of acute supination?

Dr Duncan said that Mr Annandale's paper, though extremely valuable in so far as it established pathological facts, did not lend itself to discussion or remark. The very rare injuries with which he had principally dealt—as fractures of the coronoid process and head of the radius—were accidents very difficult to recognise during life, and came under the notice of the surgeon chiefly in museums. He thought it not at all improbable that they had fractures of the coronoid oftener than was supposed. It would be observed in one of the specimens that merely the top of the coronoid was broken off in passing over the end of the humerus, not the articular surface. This, he thought, might not be uncommon in such cases. He should be inclined, in answer to what had been said, to maintain the most absolute immobility for at least a fortnight or a few days longer. The more complete the immobility at first, the less risk of inflammation and later adhesions, and the more likely was it for any such adhesions to occur in their proper positions.

Moreover, at the end of three weeks there was ample time to get rid of improper adhesions. In very young children ten days of absolute immobility might be sufficient, but in adults the joint might be kept immobile for three weeks. The movement afterwards should be of a gentle though effective character. The method he adopted was to keep the limb in a certain position, usually at right angles, for nearly three weeks, then to extend it gently and with the least possible pain, and, if necessary, to put on extension for the night, to flex it again in the morning, and keep it so till night, when it was extended, and so on. The usual method was to pump at the arm, which irritated and tended to keep up inflammatory mischief. The least painful movement was the most effective.

Mr Annandale, in replying, said he agreed with Dr Duncan on the point that had been raised by Dr Hare. Passive movement of the arm ought not to be begun before a fortnight had elapsed. He thought also that Dr Hare had not quite understood him in regard to the treatment of the case of fracture of the neck of the radius. The patient was sent into hospital with the arm midway between supination and pronation, but it was afterwards put in the supine position with a splint on the anterior aspect.

2. *Dr F. M. Caird* read a NOTE ON A TUMOUR OF THE TESTICLE. This was a well-marked example of cystic disease. It showed innumerable small cysts, which were lined with cylindrical or squamous epithelium, and which contained fluid or degenerating epithelial products. There were also small nodules of cartilage present. The testicular substance was pushed to one side, and, like the epididymis, was not involved in the new growth.

The President asked how it was that the literature on this subject was so great while cystic sarcomata was so great?

Mr Annandale said he thought that there was a third specimen of this tumour in Edinburgh. He had one somewhat larger, but very like Mr Caird's specimen, which had been removed by Mr Syme. He would be glad to have it examined by Mr Caird.

Dr Caird said he thought the literature on this subject was large from the fact that when a specimen occurred it was in all probability immediately reported. The tumour had grown slowly, and had not greatly inconvenienced the patient.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLVI.—MEETING I.

Wednesday, 12*th November* 1884.—Dr CONNEL, *President, in the Chair.*

I. *The President* gave the following

INTRODUCTORY ADDRESS.

LET me congratulate you, gentlemen, on the auspicious occasion of our reassembling, after a summer and autumn which have been prolific of natural blessings to our country, as well, I trust, as of bodily and mental renovation to ourselves.

The least observant must have felt this year the special glory of the autumn woods; and who that regarded them was not touched with the thought of that Divine generosity which makes such glories free to all? Not for seventeen years has there been such a perfect cycle of tree life as we have this season witnessed; and the sight of it has given, I think, to Homer's words, a hopefulness which they could not have upon a Trojan battlefield,—"Οια Φυλλων *γενεη, τοίη δε και ἀνδρων,*"—As is the race of leaves, so is the race of men.

It is true that the time suggests decay rather than generation or parturition; but at the threshold of another period, even of obstetric work, it is well to remind ourselves of that reciprocal action which seems to take place between external nature and the human mind, rendering the autumn and winter of the one the seed time and high summer of the other.

I cannot but think that a season more than usually bountiful will be followed by a quickened and strengthened intellectual productiveness on the part of our own and other scientific societies. In the mental, as in the spiritual world, there are times of greater refreshing and revival; and it may be expected that the workman, more than usually invigorated, will put forth his renewed energy in still greater efforts. No society can show a record of better or more thorough work than our own, and the hope may fairly be permitted that during this session it will not fall below its former level. Several older members have now quite withdrawn themselves from our discussions, but we have every reason to be satisfied with the infusion of young and active blood which has year by year been added to our vital current. Let the young members bear in mind that our eyes are upon them, and long may it be before the cares of the world, and the deceitfulness of riches, and the lusts of other things, choke the good word which they have begun to utter. The last two, indeed, in this category of obstructions need scarcely be dreaded, though neither would I hazard a too dogmatic assertion on the subject; but the first, viz., the cares of the world, is one with which every working man in our profession is probably too well acquainted. While our first duty is, undoubtedly, to the patients who have put their life and comfort in our hands,—and with the majority this duty will be (and rightly) all-absorbing,—yet it behoves every well-equipped student to beware of neglecting the gift that may be in him of power and faculty to hold up and hand on the lamp of scientific progress and acquirement. Happy is he whom the necessity of subsistence does not drive at once into the "bread-and-butter" way of viewing all professional questions; and, having escaped this danger, he may congratulate himself again if some judicious friend of larger experience take him kindly by the hand and assist him to the knowledge of himself. Let any one among us who with ingenuous mind began alone his battle with the world, think of the wasted energy, the opportunities that were with him when he knew it not, the damaging and even fatal errors he committed,—in short, the now impossible might-have-been; and does he not yearn to stretch out the guiding hand to his younger brother? Great as may have been its abuses, there was much to be said for the old apprentice system; but now that it is gone, irrevocably for most, its place is best supplied by the mutual and voluntary help which may be found in associations like this. Let us, therefore, not leave the missionary spirit in sole possession of our secretaries, but go out ourselves and bid all young brethren to our table.

The wisdom of encouraging original inquiry among mere students might possibly be doubted, though there is always a percentage of stronger minds in whom the earlier development of the reproductive faculties does not retard the processes of digestion and assimilation so necessary to individual growth. Moreover, the region of the Known, even in our own department, is so vast, that of most of us it may be said that we are ever learning yet never coming to the knowledge of the truth. While the student's chief duty is to acquire, an equal responsibility lies on every man judiciously to spend and scatter the knowledge which experience brings him; and a task that would well repay the trouble would be for every one to consider what are the personal helps and hindrances to such intellectual development as he may be capable of. Can it be that most men in our profession are too modest? The question may provoke a smile, but I am not sure that it could be answered by a general negative. Be that as it may, however, I do not think it is out of place on our opening night to consider how we may best bring out the latent faculty that may be among us. I take for granted that we shall at all times do our best to gather together the raw material of a society, for without the *esprit du corps* everything else will languish. But the members being here, the question is how best to generate intellectual warmth and consequent growth? I wonder how the apostolic precept would serve us,—"Let *every* man be swift to hear, slow to speak, slow to wrath?" I take it that herein we shall find the whole duty of an obstetric, or any other fellow. Underlying all three injunctions is the idea of active, moral, and intellectual *force*. Every man simply ought (like Mrs Dombey) "to make an effort,"—an effort to be a willing *learner*, a judicious *teacher*, and a kind and helpful *friend*. We shall always, I trust, pay a frank deference to those who are entitled to speak with authority; but while criticism must be perfectly free and unbiassed, I would bespeak an encouraging sympathy for the attempts of literary primipari, so long as their offspring is legitimate. Most willingly would I here puncture the perhaps "preternaturally tough membranes" of some middle-aged parturient. I would even thankfully recognise the good nature of any member who brings on occasion a piece of what might be called "padding," rather than allow the evening to pass unemployed; and I am sure we are deeply indebted to our secretaries for their continuous watchfulness in this respect. To be assured of a patient hearing and a painstaking criticism is enough encouragement for any man who brings forward a subject for discussion. I only express the common feeling when I promise any new comer a cordial appreciation of his work. Let him disabuse his mind of the impression that communications are of value in proportion to their length. If a general rule were to be made, I would say it ought to be the reverse of this. I well remember Goodsir's warning to intending theses writers,—"Gentlemen, a thesis should not be long, but short." Attention to this would be the best illustration of "slow to speak," as it would be the best guarantee of "swift to hear." Better that we should sit and wait for the Divine afflatus than spend one hour in unprofitable talk; but better, too, that we should meet in silence than that we should not meet at all.

It is not boys alone who have to be reminded that the man should ever be greater than his work, and that the most certain way of making and keeping himself so is to be always reducing the particular to the general; or, in other words, bringing his local and personal experience to the test of universal principles, and merging his private interests in the common good. Happy are they who by connexion with such a Society as this have it in their power to practise this humane and manly virtue, for if one has nothing original in himself the originality which he appreciates in another becomes truly his own.

One limit we, of course, impose by our constitution. Varying Plato's prohibition to suit our purpose, we say,—"Let no one enter here who does not know obstetrics." But we want more than knowledge; we want enthusiasm. The medical study of women and children offers I know not what bright prospects of future benefit to our race. It is, I think, our great Edinburgh physiologist, Combe, who somewhere remarks that, other things being equal, the most distinguished and useful men have sprung from mothers who during pregnancy have been supported in their daily duties by a steady faith in their husbands,—a certain continuous and undisturbed exaltation, as it were, of the natural wifely affection. I believe that in this our most Christian civilization we fall far below the old Greeks in our special care of the pregnant woman. The poet Byron has been often pointed to as a conspicuous illustration of pre-natal maternal influences; but we would find the same thing, if we looked close enough, in every mischievous brat upon the street. I cannot, unfortunately, do myself the honour of listening to the Morison lectures now in course of delivery by one of our oldest and most respected Fellows; but it is no disparagement to him to say that the nervous diseases of women will still

be a fruitful subject to obstetricians of a later generation. "Rerum cognoscere causas" has been held in all ages the goal of philosophic inquiry; and what investigation is fraught with brighter promise to mankind than that which concerns itself with the generation and maturation of the human embryo?

Not in dark things only, but in all things, the highest uses are the moral; and we seem to see in our special work opening vistas of knowledge and advancement, which we have as yet scarcely entered upon, in all that refers to the mutual relations of the sexes and their respective influences on their progeny. Let us but cherish in regard to our work that constant exaltation of feeling which I have just spoken of, and not only will our Society enjoy the distinction which was assigned by the presbytery to Dr Chalmers in his youth, viz., "that he was a lad o' pregnant pairts," but our lusty offspring, having no reason to be ashamed, will yet speak with their enemies in the gate.

I saw that in his opening address Principal Sir Alex. Grant quoted from a German writer a sentence which should be well kept in mind, and which busy men are in as much danger of forgetting as their younger student brethren: "The great necessity," he says, "of the present day is an organic fusion of idealism with the results of modern science." If, on the one hand, the poet and the theologian have been too ready to exclaim, "Why labour at the dull mechanic oar when the fresh breeze is blowing?" forgetting that by labour only can we make physical advance, is it not true, on the other hand, that the votaries of the scalpel and the microscope have narrowed their view to merely physical aspects, and become soul-wearied in the endless minutiæ and details of structure? I do not see how we can ultimately fail of despising our work if we do not keep our eyes upon the moral end of it.

To lighten, and even remove, the primal curse of labour, by ascertaining and applying the true method of nature, *i.e.*, the fixed conditions of good health and conduct, this certainly is our work; but it is a cheerless task if through it all we do not carry with us the heart-quickening principle that "all thinking things, all objects of all thought," are of moment to us only in so far as they tend and lead to that which is beyond themselves.

Gentlemen, I confess that I am neither young enough, nor learned enough, nor (if you like) wise enough to be a pessimist. The faith by which I live is that the over-ruling Power means well—nay, the very best—to every one of us; and, among other things, that the human race shall outlive, I do not say natural decay, but pathological conditions. Even from pre-historic time parturition has been to the human female a season of trial and danger. Explain the Mosaic writings as we may, a legend had existed which assigned to woman a peculiar curse and burden in the process. Viewed physiologically, it is, of course, simply an example of morbid evolution, *i.e.*, a want of harmonious development between the fœtus and the maternal organs. Does the question not frequently arise to us, "Must it ever continue to be so? and may not wide possibilities be hereafter open to us in the way of amelioration?" I know not what better object an obstetrical society can set before the inquiring mind than such an investigation. As yet we can but do a very little in relieving the mother and assisting the infant; but why should we despair of by-and-by, through a sound knowledge of tissue development, teaching nature herself to make the process safe and easy?

I believe—because the highest reason encourages the belief—that vertebrate man, the offspring of child-bearing woman, shall yet "in his flesh see God." Far off as yet is that Divine event, and long ages may roll bye ere man is capable of the vision. For aught I know, it may be some negro race, with their higher spiritual capabilities, who, in fuller light and happier surroundings, will "glorify Him in their bodies, which are His;" but that some such consummation exists even now in the Divine thought I do not for one moment doubt. And even were my destiny to be, like the last red leaf of autumn, whirled for ever away, I would still exclaim, "In this faith and hope let me perish!" But materialism itself has an antidote against despair. Let me quote a sentence from one of its most temperate critics. "The philosophy," says George Brimley, "founded on materialism professes the power to elevate human life to heights of felicity and knowledge of which we as yet only dream; that it will bring round the golden year for which poets have tuned their most stirring songs, and prophets yearned upon their watch-towers; and could it perform all that its votaries promise, what would be the inevitable result? Undoubtedly that the lovelier and the richer life grew—the higher in dignity, the firmer in purpose, the fuller of grand results—the fiercer would rise the longing for immortality; the more should we shrink back, appalled with horror, from the thought of personal annihilation." What is this but to say, in other words, that the conditions of all right living "presage immortality,"—that the truly "good, great man" has eternity within him? How much more, then, when he feels that he is a fellow-worker with the Central Force, and knows his purest happiness, here or hereafter, to be that he consciously contributed to the glorious issue?

If these considerations do not stimulate us to diligence, then I confess I have no stimulus to offer. In the history of that great medical school and university to which we hold ourselves closely affiliated, the passing year will be an ever-memorable one. For nothing, perhaps, was our great festival more remarkable than for the fine and reverent spirit which distinguished it. One seemed to feel the smiling approval of the beneficent Over-Soul. What an influence to radiate "for the healing of the nations!"

I speak for the great body of my country brethren when I say that we have not the opportunity, nor perhaps the ability, for original investigation; but, leaving this to our more favoured colleagues, we may be well content if by the steady and humane application, in our own humble sphere, of that scientific truth which is being yearly conquered for human use, we can persuade our less enlightened neighbours how gracious is the Spirit which "o'er the earth presides, and o'er the spirit of man." Let us never despise, however, the smallest contribution to the common stock. How long and how broad often is the basis, both in time and in space, that underlies a simple but great result. It may have happened to some of you, as it lately did to myself, to come unexpectedly, in the course of a sea-side ramble, on one of those submarine cables which connect our British Isles with the eastern or western Continent. The heart seemed to suffer a sudden inhibition from its infinite suggestiveness. It was not alone the thought of the buried treasures by which it might be thridding its silent way, more voiceless than the waves of any tidings of them. Nor was it that your exiled friend or brother could now tell you of his safe arrival at Vancouver's Island or the Antipodes, ere yet that other force which had served the good ship so well on her long and perilous voyage had ceased to rush tumultuously from its prison house. Nor yet was it the bead-roll of gifted minds—Galvani, Oersted, Thomson, Faraday, Ampère—that your imagination chiefly dwelt upon. Their fame is safe. But you thought, as in fancy you followed it beyond the far horizon, of the nameless and forgotten multitude of toiling hands that had helped to span with it the illimitable waters. No eye but God's could have marked at one and the same moment those two ships which, five-and-twenty years ago, went climbing, from opposite points, the great ocean arc that divides the old world from the new. Day and night, hour after hour, fathom by fathom, they kept paying out their line into the sea. But a day came when in mid-Atlantic they saw and recognised each other's signals. In one hour the ends were spliced, and then out beyond the shingle and the sea-weed the message went flashing through a thousand leagues!

I would not so indulge imagination did I not know how much of that genius, which is best defined as "the power of taking pains," can be assembled round this table. But for the workers' own sakes I would have the work perfused with some of this idealism. We know little or nothing as yet of the development from pre-natal influences of that morbid crystallization which we call pathology. In the mysterious recesses of the nervous system, physiological and psychological, these processes have still to be traced; but that we shall yet know as we are known, *i.e.*, as He who made us knows us—if not in degree, at least in kind—is a conviction which all rational experience, including revelation, warrants us in holding. It is not yet a quarter of a century since the localization of function in the brain was only a "pious opinion." It may be fifty or a hundred years more before another generalization of the same kind is possible; but we may depend upon it that many a fact which now appears to us trivial enough is but the shore-end of an unspliced cable that is to bind the universe together.

What an incentive to every trained and cultivated mind to be consciously moved by that highest ambition which, name it as we may—whether "the best use of our faculties," or "sympathy with the Over-Soul," or "the earnest expectation of the creature," "the groaning and travailing of creation," or simply "evolution" and "development"—was evidently the final purpose of our existence, and in the carrying out of which we have the inward proof that "earthly power doth then show likest God!"

It would puzzle me, gentlemen, to know from what text I have preached; but it seems to me quite fitting to begin our session in the spirit I have endeavoured to indicate. I am no believer in good or evil fortune. The building is not completed till every separate stone has been laid with unremitting toil; but the work will go none the less merrily for the thought of the pleasant days that may yet be spent in it.

May the session be a prosperous one, and may every one of us help mutually and well!

A vote of thanks, proposed by Dr Craig and seconded by Professor Simpson, was unanimously accorded.

II. *Professor Simpson* showed an OVARIAN TUMOUR with twisted pedicle, recently removed. A full account of this case will appear in a future number of the Journal.

III. *Dr Brewis*, for Dr Angus Macdonald, showed (1) a CARCINOMATOUS UTERUS removed successfully by the vaginal method of extirpation; (2) OVARY and TUBES from a case of Tait's operation.

IV. *Dr Skene Keith* showed a FIBROID TUMOUR removed from a patient in whom the tumour was causing distressing angina by pressure.

V. *Dr Bruce* showed a SIX MONTHS' FŒTUS, with many parts undeveloped, and with a large cystic formation on its back. One eye was only partially developed, and could be scarcely seen.

VI. *Surgeon-Major Arnott* read a SYNOPSIS OF CASES OF CRANIOTOMY in the Sir Jamsetjee Jejeebhoy Obstetric Institution, Bombay, which appeared at page 603 of this Journal.

Professor Simpson was sure the Society was much indebted to Dr Arnott for his interesting communication, which was specially valuable as giving some indication of the nature of obstetric practice in the East. He had little doubt that Dr Arnott had seen more cases of craniotomy in his Eastern practice than the whole of the Fellows of the Society put together. Dr Arnott's observations regarding the size of the fœtal head deserved special attention, and it ought to be noted how this matter should modify prognosis. Müller had shown that in certain Swiss districts there was found a frequent occurrence of justo-minor pelvis; but, at the same time, this was associated with small heads; and this ought to be carefully borne in mind in considering the question of the best method of breaking up the head. Dr Arnott favoured the method of breaking up the vault, and then tilting the head so as to take advantage of the readiest method of extraction; and there can be no doubt that this method is sufficiently satisfactory in cases where we have to do with a comparatively small head. The operation is, however, a very tedious one, and demands patience and skill on the part of the operator, whereas an operation which effects direct breaking up of the base saves the slow crushing up of the vault. This direct action on the base is effected by means of the basilyst, and this can be employed as a perforator for opening into the skull; and since the comminution of the base is effected from within, it enables us to avoid the risk to the maternal passages from laceration by projecting spicules of bone. Dr Simpson agreed with Dr Arnott that it would be well if the instrument could have an addition for crushing and traction as well, and he had already added such to the new model of his basilyst, which he hoped to have shown to the Society to-night. It was interesting to note that the current of opinion both in Germany and France was going in the direction of developing cranioclasm rather than cephalotripsy. Basilysis and cranioclasm combine to produce the character of the head of a fœtus dying in utero, and expelled after being subjected to softening and putrefying processes.

Dr Angus Macdonald was delighted to hear Dr Arnott's paper. It gave an account of his experience in a direction in which we seldom met with opportunities here. In this country one never came across such cases as Dr Arnott describes. It is rare to meet with a pelvis of less than 2½ inches conjugate. He agreed with Dr Simpson's remarks as to the action of the basilyst. He has, however, a theoretical difficulty regarding it, namely, the difficulty of making sure of the direction in which it was being driven in relation to the maternal parts. If it passes in the direction of the vertical axis of the child, then it can do no harm; if it does not do so, it could scarcely fail to penetrate the mother's tissues, and its use would be attended by disaster. He has had no experience, however, in its use, and perhaps this theoretical difficulty would vanish in practice.

Dr Underhill had the same difficulty in speaking of these cases on account of the rarity of one's experience of them in this country. He had listened with much pleasure to the paper, and was pleased to learn Dr Arnott's experience with the guarded crochet. He had himself on one occasion failed to extract with the cephalotribe, though it had been applied successively in several ways, but had succeeded by employing the crochet in the same manner as Dr

Arnott described. He thought Dr Arnott was especially to be congratulated on the eminent success of his treatment.

Dr Ballantyne had measured several heads in the Maternity, and found that the average distance from the glabella to the alveolar margin of the upper jaw was 1⅝ inch. The largest measurement obtained was 1⅞ inch, and the smallest 1¼ inch. These measurements seemed to show that even in the case of European children the head might, in cases of great narrowing of the brim, be dragged through, face first, as Dr Arnott had done.

The President was much pleased to hear the account of these interesting cases. He had had himself one case of craniotomy and another of cephalotripsy. He certainly would in any similar case which might come under his care employ the basilyst at once, and allow the bones to mould to the maternal passages. It seemed to him that the operative procedure ought to be directed to enable the head to enter the contracted portion of the pelvis, and then allow nature to complete the delivery as far as possible.

Dr Arnott thanked the Fellows for their reception of his paper. He would like to remark on the great frequency of osteomalacia among Mohammedan women, and its comparative rarity among Hindoos. The latter are as much exposed to malacia as the former, and yet the Mohammedans show the deformity much more frequently than Hindoos. In breaking up the head he did not remove by any means all the bones of the vault, but trusted to his being able to deliver by tilting the head sufficiently far back. There was some difficulty in determining the absolute facts as to the ultimate results of his cases, as the patients always left at the earliest possible opportunity; but with the single exception of one case, he felt quite sure that the history as stated was quite correct.

CARLISLE MEDICAL SOCIETY.

MEETING II.

Thursday, January 8, 1885.—Dr LOCKIE, *Vice-President, in the Chair.*

Dr Sullivan showed an INFANT, in whom a nævus had been cured by ligature.

Dr Douie showed an INFANT with congenital deformities. There was extreme talipes equino-varus on both sides, and also flexion of both wrists, with extension of the first phalanges and flexion of the second and third phalanges.

Dr M'Laren showed a MAN in whom excision of the tongue had been performed by Whitehead's method.

Dr Macphail showed an ARACHNOID and PIA MATER, which presented a recent false membrane. The patient had died of pneumonia with acute delirium.

Dr M'Laren read a paper on GALL STONE COLIC. After describing a typical attack, reference was made to the differential diagnosis from perforation of the stomach, intestinal colic, intestinal obstruction, and pericarditis. In gall stone colic the seat of greatest tenderness is at the junction of the right hypochondrium with the epigastrium, or between that and the middle line. The pulse-rate is either normal or subnormal, and the pulse may be weak and small. Sometimes the distended gall bladder can be felt; more frequently mapped out by percussion. In very rare instances the gall stones may be felt in the distended bladder. From perforation of the stomach it is distinguished by (if this be not the first attack) the history of a previous attack recovered from, by the seat of maximum tenderness, and by there being in perforation more marked collapse, and vomiting often preceding the pain. In intestinal colic the pain shifts its position; there is much flatus; and the pain often completely subsides and returns. In obstruction the pain is slow in its onset, is rarely in the upper part of the abdomen, and is followed by absolute constipation and fæcal vomiting. In some cases of pericarditis the resemblance to biliary colic is very great. In such there is an extreme sudden pain referred to the epigastrium, persistent vomiting, a slow, regular pulse. In a few days pericardial friction and irregularity of the pulse show themselves. Most of his cases had been women, the youngest 18, the oldest 60. He had seen it in a mother and daughter, and a third member of the same family, with a painless jaundice. As to treatment, during the paroxysm morphia either hypodermically, or, if the stomach is quiescent, with large doses of spirits of chloroform. To prevent fresh attacks, he had not seen good from any drug. He believed more in a diet, somewhat limited in amount, of plain, simple food, free from fat and with little sugar; a good deal of exercise; and regulation of the bowels.

Dr Lockie related a case of gall stone, in which death occurred with septic symptoms from suppuration of the bile ducts. In another case a patient had died with symptoms resembling gall stone colic. Post-mortem, no stone was found, but a hæmorrhage had occurred into the peritoneum and coats of the gall bladder, the source undiscovered. Where the pain is acute, he was in the habit of administering an anæsthetic, until the patient was under the influence of morphia.

Dr Campbell had never been able to detect gall stones by palpation. He thought jaundice was not so common as might be expected. In 375 autopsies at Garland's asylum, gall stones were found in 28 instances. In Göttingen, Heller in 260 autopsies found them in 14 instances. Gall stones were very common in herbivorous, very rare in carnivorous animals.

Dr Barnes had found jaundice only slight in his cases. He believed phosphate of soda or Carlsbad salts were useful in the interval.

Dr M'Dougall had almost always observed a rigor, like that in urethral calculus. He had seen a case of septic poisoning follow. Atropine $\frac{1}{60}$–$\frac{1}{80}$ gr. hypodermically does very well in the paroxysm.

Dr Lediard in two cases had felt stones in the gall bladder.

Dr Hall had in one case, on the advice of an eminent consultant, used soap in gelatine capsules. In searching fæces for gall stones he sometimes found only putty-like matter, and sometimes only gritty matter.

Dr Sullivan related a case in which gall stone colic had occurred along with cancer of the stomach.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

CAFFEINE AS A LOCAL APPLICATION TO THE EYE.—Dr Argyll Robertson, in the *British Medical Journal* for 3rd Jan., states that he used a 16 per cent. solution of this substance with the view of testing its merits as a local anæsthetic. He applied it in several cases, but found that "it did not produce the slightest effect on the conjunctiva to which it was applied." It, however, dilated the pupil.

THE PHYSIOLOGICAL ACTION OF CUCAINE.—In the *British Medical Journal* for 3rd Jan., Mr Eber Caudwell, of the Westminster Hospital, records a series of experiments on himself with cucaine, and thus sums up,—(1.) That cuca and cucaine exert a double action, acting as cerebral sedatives in small doses, and as cerebral stimulants in large doses; (2.) That cucaine given internally dilates the pupils; (3.) That cucaine, unless in large doses, possesses no toxic action.

CUCAINE has proved a good local anæsthetic for operations on various mucous membranes.

CUCAINE IN DENTISTRY.—Cucaine in my hands, 24 per cent. solution, has been quite valueless in preventing the pain attending tooth extraction. Applied to the gum several times, at intervals of some minutes, it has partially saved the patient the pain of adjusting the forceps; but the actual extraction, involving as it does the fracture of the alveolus and rupture of the vessels and nerve at the apical foramen, has been accompanied with the usual pain attending it. Applied to sensitive dentine, it is not at all certain in its action; and to an exposed ulcerated or inflamed pulp, not nearly so effectual as our old remedies, carbolic acid and creasote. The oil of cloves, with which the cucaine appears to have been mixed, will account for the success attending its application in the case reported in last week's journal (Morton Small, Dental Surgeon, Westminster Hospital).—*British Medical Journal*, 10th January 1885.

PISCIDIA ERYTHRINA.—The author has made a number of observations with a dry extract administered in pill form. The pills contained gr. j., and were given in doses ranging from two to four, sometimes given in one dose, and occasionally in repeated doses during the night. In nine cases of insomnia the results were perfect, the patients slept all night, awoke refreshed, without symptoms of intoxication, dizziness, headache, or constipation. In a few cases, vomiting and the narcotic effects of the drug set in. The dry extract is about twenty times as strong as the fluid extract, of which patients can take from 75 to 200 drops. Piscidia is milder in action than opium, does not cause itching of the skin, has no effect on the pulse, temperature, urinary or integumentary secretions (*Deut. Med. Zeit.*, by Frohmüller).—*Therapeutic Gazette*, Dec. 1884.

STRYCHNINE IN INFANTILE PARALYSIS.—The author has under his observation two children, one of five, and the other of six years of age, where spinal paralysis existed for three and one-half years. In the first case the right lower extremity was paralyzed, with atrophy of the muscle. It was treated with electricity, massage, iron, nitrate of silver, etc., but the results were very discouraging. Petrone finally concluded to give strychnine a trial in 0·001 doses divided into two pills, given daily. In course of 34 days considerable improvement could be noticed, and in 15 days more the child was entirely cured. The muscle atrophy did not disappear so rapidly, but improved gradually. The muscles formerly had no sensation, but now they reacted quite well to electric stimulants. The second child — paralysis of the left lower extremity, with atrophy of the muscle—regained the use of the leg in 66 days, and the muscular atrophy gradually disappeared. Henberger verifies this same effect of strychnine in infantile paralysis. The author claims that the preparations of strychnine stimulate the activity of the motor cells of the anterior horns. In this form of disease these cells undergo a pigmentary degeneration or atrophy, but when artificially stimulated by the use of strychnine internally, they regain their function, and perform their duty as before (*Memorabilien*, by L. Petrone).—*Therapeutic Gazette*, Dec. 1884.

RESORCIN AS A HYPNOTIC. — In all cases of paroxysmal colic accompanying cancerous, dysenteric, tuberculous, and other diseases of the intestinal tract, and inability to sleep, resorcin exerts an important action. This is also true of the intense pains of vesical and biliary calculi, which prevent sleep. Resorcin is applied as an anodyne locally in inflammations and injuries, likewise it is employed as an infallible, safe hypnotic. It acts as a dynamic agent on centres of the nerve system. For general medicine it must suffice at present if we make the statement and give assurance, that when given to patients suffering pain and inability to sleep it is an efficient and safe remedy. In every instance where resorcin is administered as a hypnotic it must be given in toxic doses. This does not compromise the drug in the least, since it is well known that symptoms of intoxication following the administration of toxic doses of resorcin are not any more injurious than the consumption of red wine in such quantities as to cause intoxication. In such cases where chloral, morphine, paraldehyde, piscidin, and other hynotics are contra-indicated, according to authors, I find, according to my experience, resorcin indicated, *e.g.*, diseases of the stomach and bowels in phthisical patients, especially when the larynx becomes secondarily involved. It assists digestion, and arrests the cough and vomiting, without causing a feeling of dulness of the system, as after morphine. In psychical excitement and in delirium tremens, resorcin may not be as efficient as paraldehyde, which has yielded excellent results (from *Prager Med. Wochschr.*, by Andeer).—*Therapeutic Gazette*, Dec. 1884.

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. Gibson, M.D., and William Russell, M.D.

A Little-noticed Symptom of Meningitis.—During the last five years Kering has devoted a great deal of attention to meningitis, and from careful observation of fifteen cases—thirteen of epidemic cerebro-spinal meningitis, one of tubercular meningitis, and one of suppurative cerebral meningitis, he has found the presence of a symptom to which little attention has been given. In the majority of cases of meningitis, the well-known classical symptom of rigidity of the neck and back can be made out, and in a certain number there is also contracture of the extremities. But in many cases (the greater proportion, according to Kering's observations), while there is rigidity of the neck and back when the patient is in bed, there is no contracture of the extremities. If the legs or arms should happen to be bent while the patient is lying in bed, they can with ease be straightened. But if the patient be raised up, and set, for instance, on the edge of the bed with the legs hanging down,—not an easy matter if there be a high degree of rigidity of the neck and back,—the rigidity becomes much greater, and there sets in also for the first time *a contracture in the flexed position of the knee-joints, and sometimes of the elbows as well.* Kering has found that when attempts are made to straighten the lower extremities, they can only be brought to an obtuse angle at the knee-joint. He has further noticed that when the patient is moved from a sitting to a standing position, the knee contracture disappears and returns again when the former posture is resumed.—*Berliner klinische Wochenschrift*, 29th December 1884.

STUDIES ON AGRAPHIA, SUGGESTED BY A CASE OF PURE MOTOR AGRAPHIA.—In an historical introduction to this thoughtful contribution, Pitres, while doing full justice to the work of Ogle, rescues the labours of Marcé, who discovered agraphia, from oblivion, and proceeds to pass in review the opinions of previous observers. He cites one of Ogle's cases, and also one of Charcot's, and these are followed by a description of one which he has lately had under his own care, the various symptoms of which are very carefully analysed. This was the case of a gentleman who had contracted syphilis ten years before the attack of hemiplegia and aphasia, for which he was seen. He was in an almost comatose condition, with complete paralysis of the right extremities and of the sphincters. His condition seemed desperate, but energetic anti-syphilitic treatment (two inunctions of 150 grains of Neapolitan ointment each daily) caused a return of intelligence, memory, and speech within a week, and a more gradual recovery of power in the arm and leg. At the end of eighteen months the condition of the affected extremities was very little removed from that of the others, save for an exaggeration of the reflexes and a slight rigidity of the right leg. The special senses were not affected in any way except by some hemianopsy of the right eye. There was no aphasia (by which M. Pitres means the classical affection of speech without any change in intelligence or in the muscular apparatus), but he had completely lost the power of writing with his right hand. When asked to write a word he could not do so. He could read the same word or spell it, but was utterly unable to write it. He had therefore learned to write with his left hand, and after writing with that hand the word asked for, he was able to copy it with the right hand. When asked to write any word shown him in print, he was able to copy it exactly in the printed characters, but he could not put down the word in written characters unless he were allowed, as before, to do so first with the left hand and to make a copy of it with the right. Pitres summarizes our knowledge of the physiology and pathology of memory. He distinguishes the *partial memories*, so to speak, which are concerned in spoken and written communication, and which fall into three classes—1. *Visual memory*, which gives us the memory of the form of letters, and of their relative symbolic value; 2. *Auditory memory*, which is related in the same way to acoustic symbols; and 3. *Motor memory*, which preserves the recollection of the combined muscular acts necessary. Any one of these may be affected without interference with the others. The loss of the first gives *word-blindness*, of the second *word-deafness*, and of the third *motor agraphia*, and recorded cases of such affections have allowed a provisional localization of the lesions which cause them, which is well known through the works of Charcot and Ferrier. Agraphia may be caused by affections of any one of the partial memories. It may be due, in the first place, to *word-blindness*, in which case the patient can write down his own thoughts, or write to dictation, but he cannot read what he has written, or write from any written or printed example. It may, in the second place, be due to *word-deafness*, in which case the patient can write his own thoughts or from any written or printed specimen placed before him, and can read what he has written, but he cannot write to dictation. And, lastly, it may be the result of *loss of motor memory*, when the patient will be unable to write his own thoughts, or to dictation, or from a copy, although he may be able, as in the case described by Pitres, to make a laborious copy of anything set before him in the same way as he would copy a drawing. M. Pitres urges the necessity in all such cases of making a very thorough examination by asking the patient to write from a copy, to write to dictation, and to put down his own thoughts.—*Revue de Médecine*, 10th November 1884.

THERMONEUROSES.—In an article by Longuet, dealing with many of the phenomena of this subject, he makes the statement, at which few will cavil, that the nervous system exerts a direct influence on heat production, not only in causing the highest degrees of temperature, but in giving the very low thermometric readings of collapse as well. He vigorously protests against the false interpretation which makes the term "hyperthermy" synonymous with the febrile condition. He attributes the various phenomena to the vaso-motor action, but does not venture to advance any theory as to the mode of operation, contenting himself with the remark that the clinician has to wait until the physiologist throws some light upon his path.—*L'Union Médicale*, 4th and 6th January 1885.

THE REFLEXES IN CHOLERA.—From careful examination of seven cases of cholera, in every one of which the reflexes were exaggerated, Josias concludes that in cholera, as in typhoid fever, there is probably a constant increase of reflex excitability of the cord.—*Le Progrès Médical*, 31st December 1884.

AN EPIDEMIC OF ICTERUS.—Lürman describes an outbreak of jaundice which took place in a large factory in Bremen, at which about 1500 men were engaged. There was no cause for it in the atmospheric conditions, the state of the drinking water, or the nature of the employment, which was shipbuilding, practical engineering, and iron-founding. Altogether, 191 persons were attacked by jaundice, and all of these had been a short time previously inoculated. The inoculation was mostly performed on the establishment at three stations, the numbers attended to at each station being at *A* 540, at *B* 466, and at *C* 283. In addition to these, 50 persons who were absent at the time were afterwards inoculated with the same lymph. At the same time 87 persons belonging to the works were inoculated by other medical men with other lymph, and from the termination of the inoculation till the end of the jaundice epidemic, about 500 persons were taken on at the factory. Not one of the 87 persons inoculated elsewhere, or of the 500 new-comers, was affected by jaundice, and of those inoculated on the spot the following proportion were attacked:—

At *A*, out of	540	inoculated		141	had jaundice.
„ *B*, „	466	„		35	„ „
„ *C*, „	283	„		14	„ „
Out of the	50	„	afterwards,	1	„ „
	1339			191	

Lürman has at present no explanation to suggest of the causal nexus.—*Berliner klinische Wochenschrift*, 12th January 1885.

Albuminuria of the Fœtus and of New-Born Infants.—Ribbert has set himself to give an explanation of the frequent presence of albumen in the urine of young infants and still-born children. The urine in the cases examined by him contained epithelium, and hyaline or finely-granular casts. The kidneys were examined in the fresh condition, and then boiled and hardened in alcohol, in order to coagulate and fix the albumen. In the fresh state the organs were hyperæmic, and the epithelium was somewhat swollen, without any further changes. His researches lead him to the conclusion that the albumen is derived from the glomerules entirely. In order to determine whether this "physiological albuminuria of the newly-born," as he calls it, is to be regarded as the continuation of a similar process in fœtal life, he had a large number of embryos supplied to him by the butchers. These were mostly the young of cows, sheep, goats, and pigs. The capsules of the glomeruli and the tubules were found to be filled with coagulated albumen, after being prepared in the same way as the human kidneys. Ribbert therefore concludes that in the embryo there is a continuous flow of blood-plasma through the glomeruli, which he regards as the result of their incomplete development, the glomerules not being at that stage capable of the functions they have to perform in later life.—*Archiv für pathologische Anatomie und Physiologie und für klinische Medicin*, 3rd December 1885.

MEDICAL PERISCOPE.

By Francis Troup, M.D.

Naphthalin in Disease of the Bowels.—Professor Rossbach, of Jena, reports successful treatment of chronic catarrhal affections, of small and large intestines, with or without ulceration (but not caused by incurable complications, as carcinoma), cholera infantum, typhus abdominalis, and tubercular ulceration by naphthalin. He purifies commercial naphthalin by repeated washings with alcohol and sublimation after drying, when it is obtained in pure white crystalline plates. He chiefly gives it by the mouth, as it does not disturb digestion, in doses varying from ·1 to ·5 grammes, and he finds that a daily amount of 5 grammes can be well borne for weeks. He gives the prescription for adults as follows:—

℞ Naphthalini purissimi,
Sacch. albi, āā 5·00
Ol. bergammottæ, 0·03
M. f. pulv. Divid. in partes æquales xx.
Sign. 5–10–15–20 powders daily in wafer.

Some 24 cases of cholera infantum are shortly narrated where hourly doses of ·1 gramme cured in a very short time.—*Berlin Klin. Wochensch.*, No. 42, 1884.

ILEUS TREATED BY WASHING OUT THE STOMACH (*Ibid.* Nos. 42, 43).—Dr A. Cahn, after failure of all the ordinary means, in three cases of this disease overcame the bowel stenosis in this way. The first was a girl aged 16. Obstruction had lasted eight days. After five washings in twelve hours, freeing the stomach of regurgitated feculent matter and gases, the natural passage was restored. The second, aged 38, of nine days' duration, possibly caused pathologically by an ancient para or perityphlitis, was overcome by one washing. The third case was in an old man; the ileus, probably due to invagination, had lasted twenty-three days. Twice daily for seventeen days the stomach was washed out before a natural stool was obtained; seven days after bowels had acted a necrotic piece of large intestine, 13 ctm. long, and 2·5 broad, furnished with an epiploic appendix, appeared in the stool. The patient now ate and drank well, but ultimately succumbed to an attack of peritonitis and cystitis, twenty-one days after the bowels had moved. No post-mortem was permitted. The remarkable thing here is the long-continued obstruction. (Leichtenstern, in Ziemssen's *Handbook*, finds that in 350 cases the stenosis lasted from eight hours to thirteen days). Yet, during all the twenty-three days, it was found possible, by regular persistent evacuation of the stomach, to prevent vomiting and remove an enormous quantity of fæces, till at length the conditions became favourable for a re-establishment of the lumen of the bowel. The problem of making the canal of the bowel again passable has frequently to be solved when we neither know the where nor the why of the block. This end seems to be attained simply by getting out of the way the fæcal masses and gases which accumulate above the impediment. If we succeed in this, nature brings about the rest. The usefulness of this evacuant process is easily seen. First, room in the abdomen is procured, and then the release of invaginated, incarcerated, strangulated and twisted portions of bowel follows. Further, the abdominal dilatation and tension of parts above the obstruction is lessened, and thereby their mutual pressure on each other in the peritoneal cavity. Lastly, and this is the chief benefit, the removal of accumulated fluids stills the violent, irregular peristaltic motions, and replaces them by gentle, orderly, and beneficial ones.

OPERATIVE OPENING OF LUNG-CAVITIES (*Ibid.* No. 42).—Dr E. Bull, of Christiania, speaks of the artificial formation of lung fistulæ, which he thinks is indicated wherever there is diagnosed a circumscribed cavern with pathological contents, and where this cavity can be reached without placing the patient in greater danger. One might then hope, by drainage and other local treatment, either to bring about the obliteration of the cavity, or to content one's self with a permanent fistula, through which it could be properly emptied and cleaned, and so spare the air passages the transport of stuff which in many ways might become dangerous to the organism. Most men who have had to do with lung operations, and who favour such interference, agree in essentials regarding certain kinds of cavity formations. For instance, a lung-abscess, correctly diagnosed, and so situated that it can be opened through the chest-wall, is best treated, like any other abscess, by incision, drainage, and injection, according to common surgical principles. It is the same with gangrene of the lung when circumscribed, its seat correctly known, and if this spot can be reached from the outside. Gangrene of the lung can of course heal without operative interference, either perfectly or leaving a cavity with pyogenic membrane. But if efflux for the dead products can be obtained through the chest-wall, the sooner it is done the better. While waiting, the patient's powers sink and the local process may spread. Pain, cough, fever, and stink deteriorate his condition, and the danger of septic infection is always near. Overflow of necrosed shreds of tissue and fluids into communicating bronchi causes a putrid bronchitis, and can easily develop other gangrenous foci. Reference is made to a successful case related in *Nord. Medic. Arkiv*, and to one in Chicago, which is to appear in the *American Journal of Medical Science.* While unanimity of view is pretty general in the cases mentioned, it is different with bronchiectatic caverns. The chances of operation being beneficial are here not so good, because the dilatations as a rule are numerous, and perhaps are to be found in both lungs. Operation should therefore be restricted to cases where there is one large cavern, and where the clinical symptoms show that the patient's condition is aggravated by putridity of the secretions exciting fever. Medical literature contains communications which show good results, but the great difficulty is the imperfection of our means of diagnosis when it has to be determined whether there is one cavity or a network of smaller ones. The author lately opened a lung, convinced he had to do with one large cavern, but the post-mortem showed that the lobe operated on was a honeycombed conglomerate of bronchiectasies. Opinions differ most, however, when the talk is about opening tuberculous caverns. In the main they should not be touched, or if so, only with the view of bringing patient into better conditions of life. Mosler has opened and drained in one case, death taking place eight months afterwards. As already indicated, the great difficulty is the want of precise diagnosis. Even exploratory puncture is not infallible, whether its result is positive or negative. In the author's case, mentioned above, puncture gave a positive result, a puriform fluid was aspirated in the region where the cavernous sounds were heard, but the section showed that it was derived from an encapsuled abscess between the pleural membranes. On the other hand, a negative result does not exclude a cavern; its contents might be too tough to aspirate, or it might be empty at the time of puncture. An example of the difficulty is related by Pel of Amsterdam (see *Edinburgh Medical Journal*, page 1055, for 1883-84). Pleural adhesions at the place selected for operation would be an advantage, but their absence need be no contraindication. The case related by Krönlein (see *Edinburgh Medical Journal*, page 80, July 1884) of lung resection shows that the pleural cavity may be freely opened and yet the issue be good. Amyloid degeneration, if extensive, and if the intestinal tract is badly affected, is a contraindication. As to the operation itself in its chief lineaments, it is that for an empyema, a simple incision of chest-wall, or that combined with resection of rib. W. Koch's thermo-cautery for penetrating the lung is a great step in advance; unpleasant bleeding, to be expected in gangrenous cases, is thus avoided. Injections are a very unimportant part of the after-treatment, drainage is the main point.

ÆTIOLOGY, DIAGNOSIS, PROGNOSIS, AND TREATMENT OF TUBERCULOSIS (*Ibid.* Nos. 44, 45).—Ewald designed this lecture to fix the sum of our knowledge and the resulting standpoint for the clinical physician to a given time. He says that all discussion concerning tuberculosis must now start from the firm assured fact that definite, specific, well-characterized micro-organisms are present in all the processes which we designate tuberculosis in the wide sense—that is, in acute miliary tuberculosis, in so-called infiltrating tubercle of lungs (cheesy broncho-pneumonia, phthisis), in generalized tuberculosis, in tuberculosis of joints and bones, in scrofulosis of glands, and lupus. There can be no doubt that one and the same ætiological moment is at the bottom of all those processes, and that the bacillus of Koch occurs in them all and precedes in time and place all other phenomena. Strictly taken, we only know that Koch's bacillus when inoculated experimentally sometimes breeds miliary, at other times infiltrated tuberculosis with formation of caverns. Further, lupus tissue, in which we must suppose the bacillus present, has been successfully inoculated. But the infallible certainty with which we can demonstrate in the first named affections that the bacillus is the causative moment, and that by it, and entirely by it, we can produce the aforesaid processes, justifies the conclusion that wherever it is demonstrable it must be the efficient cause of the disease with which it is associated, although we do not know, as yet, the conditions why at one time a lupus, at another a tuberculosis or scrofulosis results. The question as to the infectiosity and heredity of tuberculosis could not fail to be discussed from the new standpoint with renewed vigour. The question whether a process is infectious or contagious cannot always be decided certainly; however sharply the idea of each may be defined, in practice the one passes into the other. If we designate tuberculosis as infectious, we must remember that the point essentially is that there is first a contagious transference of disease germs to which under subordinate circumstances an infection is added. Experimentally, in the laboratory of the institute, it has been abundantly established that tuberculosis is infectious. How about the laboratory of nature? Can we believe that what we can call forth experimentally repeats itself among men in the ordinary course of things? We know nothing of an epidemic or sporadic cropping up of tuberculosis; therefore we cannot reckon tuberculosis among those epidemic infectious diseases whose virus is suddenly produced in great quantity in a definite place and diffuses itself from one focus. We must suppose that Koch's bacillus is everywhere. Certainly it is a true parasite, and in its evolution bound up in animal bodies. But abundant opportunity is given in the flesh and milk of tuberculous animals to spread itself abroad. But again, as all mankind is not tuberculous, quite special factors must step in to make a hitherto sound person a tuberculous one. Here, now, the following possibilities come to the front—First, *Transference by living together*. This can happen by reception of the exhalation and secretion products of the sick through the breath, or by inoculation through casual skin abrasions or coitus. If we bethink ourselves that about one-seventh of all deaths are caused by consumption, and that one-fourth of all men are tuberculous, it is surprising how few cases really are infected in this way. Against the few unobjectionable cases of infection among married people, thousands are related where there was none, and so show that under rare circumstances, which we do not properly understand, the infection of a seemingly healthy individual may take place. Second, *The danger of infection in food*. Sources of this kind are the milk of tubercular mothers and the milk and flesh of tubercular animals. Now, for all those possible modes of infection is there needed a sort of preparation of the organism, a so-called disposition of the receiver? It seems as if the mass and intensity with which the organism is surprised by the virus in certain cases does not demand any precedent disposition, or that animals possess a higher receptivity than man. We must suppose this in all experimental infections, and in those cases in man where tuberculous food is actually given. But in those cases of seemingly spontaneous origin of tuberculosis in healthy men, we cannot give any explanation, unless we suppose a peculiar individual receptivity or proclivity. This may be brought about by catarrh, adhesions, inflammatory process of lungs, by going through certain other infectious diseases, by disposing trades and habits, and is thus acquired; or it may be inherited in the development of the individual through formation of thorax, slender build, erethism of nervous system and other causal moments. How otherwise is it explicable, without supposing such a proclivity, that with bacilli everywhere, consequently opportunity of infection everywhere, a mere fraction of mankind sickens of tuberculosis? Mortality statistics of insurance offices show that the greater portion of tubercular deaths happens among hereditarily affected persons; the inherited therefore outweighs the acquired disposition. But what is inherited? the virus itself, or a (but not specific) disposition which exerts a less resistance to the tubercle virus. Both means of transference are possible. Cases, partly spontaneous partly experimental, in embryonic and fœtal conditions, have been noted where the infection must have been direct from the maternal organism. But the much more numerous cases in which the influence of heredity manifests itself in later age can only be understood on the assumption of an inherited disposition. But for the diffusion of tuberculosis other factors, beside mere personal qualifications for the virus, come into consideration: such are density of population, work in factories and where air is laden with dust. Singularly enough tuberculosis is not most abundant where social misery and poverty are greatest. In upper Silesian mining districts, where typhus and relapsing fevers prevail, tubercle is inconsiderable. Diagnosis is wonderfully helped when examination reveals the bacillus; in fact, it is absolutely certain. A negative result is also of great worth, for where a road outwards has been made for the bacillus, a competent observer will find it in 96 per cent. of tubercular cases; but in acute miliary tuberculosis of lung or kidney it cannot be demonstrated till disintegration has begun. Elastic fibres in the sputum are present in 90 per cent. of cases of lung tubercle, but as they appear in other destructive processes involving the lung parenchyma, they cannot claim the same diagnostic importance. (See note). Are we now in any better position as regards prognosis by being able to show the bacillus? and practically the question is limited to lung and laryngeal tuberculosis; in cases of lupus and scrofulosis, its demonstration, however interesting theoretically, is of no practical moment. Has the quantity of bacilli in the sputum any certain relation to the course of the diseased process, and can we draw therefrom any sure prognostic conclusion? Guttmann and Ziehl have abundantly shown that as bacilli in sputum can only come from open cavities, they can be no measure of the number of tubercular hearths present in any given case; as further they can reproduce and multiply in bronchiectatic and cavern contents without thereby having the slightest influence on the special tubercular process, and as prognosis and course depend on tubercular developments in other organs, quite independent of sputum and its contained bacilli, therefore no new prognostic help is to be got from the presence of bacilli in consumptive cases. Can treatment now be looked at from any new point of view? Prophylaxis, endeavouring to weaken if not remove any inherited or acquired disposition, is the lever to lift away this scourge of mankind. We know exactly certain infective sources which should be stopped up, and certain disponing factors which we should strive to eliminate. Here, if anywhere, "*Principiis obsta.*" Whether the cells are merely passive, furnishing a favourable soil in consequence of any chemical or other constitution acquired by inheritance on which the bacillus, by appropriation of cell material and formation of secondary products, may grow, or whether they are actively engaged and under normal circumstances react against the invasion of the schizomycetes, and are only overwhelmed by preponderating numbers of the latter, in practice the aim must be to strengthen the organism as a whole, and thereby also its component parts. This to be arrived at by State and personal hygiene. A further task is the avoidance of infection. Disinfection of expectoration and other secretions of the phthisical should be carried out, mouth-kissing forbidden, but times are hardly ripe for their isolation like the lepers of old. But there is one well-known source of direct infection, and one easily controlled; no flesh or milk of tuberculous (perlsüchtig) animals should be used as food. Falks' experiments have shown that no weakening of the virus is gained by preventive inoculations. As to therapy: endeavours to turn our new knowledge to therapeutic use have, as yet, been without success in tuberculosis of lungs and internal organs. Neither the inhalation nor assimilation of anti-bacillary substances has given any other results than negative or uncertain ones. But the earlier diagnosis now possible of the first stadia of the disease renders the probability of therapeutic progress much more likely. What has to be worked at thoroughly is:—1. The extermination of sources of infection. For although the danger of infection from man to man is not very great, it is certainly so from animals to man. 2. The biology of the bacillus and its causal connexion with tuberculosis is still to be investigated. 3. The nature of the proclivity is to be clearly made out, not only in regard to infection from person to person, but particularly as to the disponing influences brought about by cosmical and social circumstances. Here it would be advantageous to reverse the question, When and how does the infection occur? and search for the reasons why so many escape where every opportunity for contagion is liberally offered. 4. Our chief aim therapeutically must be to master the initial stadium of the disease.

Note.—At the present time Koch's bacillus, like Aaron's rod, swallows up every other thing, and too low a value is set upon the appearance of "curly fibre" in the sputum. Since the publication in 1852 of J. Hughes Bennet's *Introduction to Clinical Medicine*, the translator has searched the sputa of all cases of phthisis which have come under his notice, and on many occasions, when good stethoscopists could find no physical signs, or only those of a catarrh, the presence of elastic tissue has shown what was impending and did come. His belief is that a competent observer will detect the curly fibre as early as, or even before, the bacillus; the latter must find a way out, and in the process lung parenchyma must be disintegrated. However, in conjunction with Dr G. H. M'Kenzie, a trained observer of the bacillus, he is engaged in inquiries which, it is hoped, may definitively settle this point.

PERISCOPE OF STATE MEDICINE.

By James Allan Gray, M.A., M.D. Edin., F.R.C.P.E.

The External Appearances of Pistol-Shot Wounds.—One of the most important and original contributions to this subject of late date is that published by Dr D. B. N. Fish of Amherst. After detailing the views of various authors as to the relative sizes of the wounds of exit and entrance, the inversion and eversion of the edges, the explanations of the blackened and burned appearance of the edges, the scattering of shot, the effect of the explosion of powder alone, the appearance of the apertures in the clothing made by the projectile, Dr Fish goes on to state—"Nearly three years ago, while making some experiments in firing at short range, I noticed, in addition to the smutting of the paper by smoke, and to the marks of the partly burned and the unburned grains of powder distributed around the bullet-hole, one spot blacker and more burned than the rest. I found this was caused by the flame of the gases, by the burning powder, and by the residue or ash, of the burned powder striking and resting upon this place. I also noticed that this burned and blackened spot held a most constant position directly above, or above and a little to one side of the bullet hole." In explanation of this, an officer of the United States Ordinance Department told Dr Fish that "as the velocity of the powder gases was greater than that of the ball, powder stains are found above rather than below the bullet hole," and the latter, hoping to get from this some indication of the direction from which the shot was fired, made several experiments by firing at different angles, but with little or no effect, the mark always appearing above the bullet hole. Later, however, it occurred to him to fire the pistol with the hammer down, and then the spot appeared directly below the bullet hole. Further experiments showed that the position of this burned, or burned and blackened spot, varied constantly and exactly as the top or hammer of the pistol is turned on the long axis of the barrel, and that it is due neither to the kind of weapon nor to the kind of ammunition used, but "is due solely to the recoil of the muzzle of the weapon in the direction of its sight." For "when the recoil is prevented by fixing the weapon firmly in a vice, the bullet hole will appear at or near the centre of the spot instead of at one side of it." "It is barely possible that a pistol will be found in which the centre of gravity or of mass is so far forward on the line of its barrel that the recoil is downward when held in the usual position for firing; but I am assured by gun-dealers and manufacturers that though rifles are sometimes so weighted at the muzzle, by brazing on a piece of iron, so as to prevent the recoil upward, no pistols are made that do not thus recoil." As a consequence of these observations, Dr Fish offers the following rule as to the position of the weapon:—"Whenever this burned or burned and smutted spot is found, either upon the skin, the hair, or the clothing, at one side of the wound made by the bullet, by placing the muzzle of the weapon upon the wound, so that the line of the hammer and sight will meet a line drawn from the centre of the wound through the centre of the spot of burning, or of burning and smutting, you will have the exact position of the weapon when it was fired." By *position* of the weapon here is not meant either the distance at which it was fired, or its angle to the body, the latter of which does not seem to modify the rule just laid down. Where the burning and smutting do not correspond, as will happen with revolvers of large calibre and short barrel, the rule applies to the point at which the burning is most observable. The distance of this brand from the entrance bullet hole will vary with the "kick" of the pistol, and with the firmness with which the pistol is held. "Hair, unless it is wet or very oily, will show marks of burning at 6 inches, with even the smaller revolvers and pistols; at 8 to 10 inches with a ·38, and at 12 to 13 inches with a long-barrelled ·44 revolver." The distance from the body at which the weapon must be held, to show the brand on broadcloth, white flannel cloth, and cotton, is given in some detail for various revolvers, and is summarized as follows:—"For small pistols and revolvers, not over 4 to 6 inches; for large weapons of this class, not over 12 to 14 inches." If the statements laid down by Dr Fish be supported by other observers, we have in his rule a most important aid to the detection by the medical jurist of the direction of a weapon at the time of firing, and consequently an important aid to the determination of the difficult question of whether a given wound was caused homicidally or suicidally.—*Boston Medical and Surgical Journal*, page 313, Oct. 1884.

HOMICIDE BY A WOUND OF THE VULVA.—An interesting case of death from hæmorrhage, due to a wound of the vulva, is reported by Dr F. W. Draper of Boston. The injury is thus described—"The upper part of the vulva was the seat of the only lesion from which the hæmorrhage . . . could have proceeded. This lesion, as the specimen exhibited shows, was a wound, with regular, clean cut, slightly curvilinear edges, one inch long. Its upper extremity was immediately below the clitoris, in the middle line of the vestibule or space between the clitoris and urethra. It took a direction downward and outward, curving slightly to the left, its lower end being a little to the left of the meatus urinarius. It was half an inch deep at the deepest point. Its course from the surface inward was not direct or parallel with the antero-posterior plane of the body, but there was a slight levelling from the left toward the right. In a wound so superficial and limited it was impossible to demonstrate the vessels involved in the incision, but the arteries most exposed to division were the terminal branches of the right internal pudic and of the inferior vesical." A full history of the case is given, and the question as to what weapon inflicted the wound is discussed. Dr Draper concludes that "while admitting the possibility of fatal hæmorrhage from a contused wound of the pudendum, and even granting that a kick with the shod foot might divide the tissues, and leave something of the appearance of a cut upon them, it must nevertheless be insisted that the vertical direction of the lesion in the present case, its clean-cut regular edges, its smooth inner surfaces, the absence of swelling and of ecchymosis in the adjacent parts, are quite strong points of proof that a cutting rather than a blunt instrument was used."—*Boston Medical and Surgical Journal*, vol. cxi., page 217.

N.B.—It seems odd that an incised wound of the pudenda should be only an inch long and half an inch deep at its deepest point. Several recorded cases of contused wounds in that region have had approximately these measurements. A kick with a shod foot from behind while the woman lay on her side would apparently explain all the appearances.

POISONING BY SANTONIN—M. J. Heimbeck relates, in the *Norsk Mag. f. Lägevidensk*, 3 R. xiv., 1, S. 38, 1884, a case of acute illness in a girl five years of age, ascribed by him to poisoning by santonin. The girl, who had suffered previously from diarrhœa, was given, at 5.30 P.M., two pastilles, which together should have contained 0·06 grammes (about a grain) of santonin. An hour

nd a half later the child saw everything yellow and green, and n hour afterwards she was put to bed, where she slept restlessly ntil 2 A.M., when she awoke, became more restless, and vomited. owards morning she sprang out of bed, and wished to run about. fter a drink of milk, she again vomited some yellow-green aterial, and then fell into a comatose condition. In the afternoon she became unconscious, and an ice-bag was applied to the ead. During the night she was again restless, throwing herself bout, and not knowing where she was. From time to time convulsions were observed affecting especially the right arm, though squinting was not noticed. On the following evening (48 hours from the time at which the pastilles were given) a large blister was applied to the neck, and 0·4 gr. (6 grains) calomel, with 0·1 gramme (1½ grains) of santonin administered internally. The bowels were thereby thoroughly emptied, and a few ascarides removed. On the following day the patient was conscious, and otherwise quite well.—*Schmidt's Jahrbücher*, 1884, Band 201, p. 128.

N.B.—Mr Heimbeck thinks the case one of santonin poisoning, and to explain this in view of the larger dose of santonin not causing further poisoning, supposes that the pastilles had contained more santonin than they were reputed to do. But the symptoms of the illness would possibly be better explained by the theory of intestinal irritation due to the presence of ascarides.

POISONING BY CHLORATE OF POTASH.—A solution of this salt was inadvertently employed in place of lime-water to dilute the condensed milk for a child three weeks old. About 0·75 grammes (10 grains) of the salt had been swallowed before symptoms of poisoning appeared. These consisted of lividity of the visible mucous membranes, coldness of the extremities, staring eyes, and scanty secretion of urine, which stained the linen black. Recovery ensued. Strömborg in *Finska Läkaresällsk, Handb.*, reported in *Schmidt's Jahrbücher*, 1884, Band 201, p. 129.

POISONING BY CHROMIC ACID.—Professor Netzel relates a case where death followed the use of chromic acid employed as an injection in a case of intraparietal uterine myoma. Immediately after the injection there appeared violent vomiting, diarrhœa, and abdominal pain—symptoms which Netzel had seen occur in similar circumstances, but which had quickly disappeared. In this case, however, they remained; the general condition became worse, bleedings began, and ill-smelling discharge set in, the strength sank, and the patient died four weeks afterwards. At the autopsy the uterine cavity was found enlarged, the mucous membrane coloured brownish-green and friable, and the uterus contained a quantity of ill-smelling bloody discharge. In the vagina there were two ulcerations, with eaten-out edges and ill-coloured ragged surfaces. The mucous membrane of the bladder was thickened and injected, the urine mucopurulent, the kidneys were soft, their cortices swollen and anæmic, the pyramids yellow-white. The stomach was injected and ecchymosed, the pylorus pigmented. Chemical analysis found no chromic acid in the blood.—*Arsberättelse fråu Sabbatsbergs Sjukhus i Stockholm*, reported in *Schmidt's Jahrbücher*, 1884, Band 201, p. 129.

CRITICISM ON THE EXHIBITS OF DISINFECTANTS AT THE HEALTH EXHIBITION.—Under this heading, Mr A. Wynter Blyth gives his opinions on the actions and uses of disinfectants generally. Disinfectants, in relation to their influence on microbe life may, according to Mr Blyth, be divided into—(*a.*) *Sterilizers or Germicides* —That is, agencies destructive of pathogenic micro-life, *e.g.*, heat, strong mineral acids, undiluted chlorine, corrosive sublimate. (*b.*) *Agencies which as a rule* do not destroy pathogenic life, but act as inhibitors to the growth and multiplication of microbes generally, *e.g.*, dilute carbolic or cresylic acids. (*c.*) *Deodorizers*—Substances neither overpowering nor masking bad smells, but destroying them, *e.g.*, peroxide of hydrogen, chlorine. (*d.*) *Antiseptics*—Substances which arrest decay, *e.g.* thymol, common salt. The action of disinfectants in modifying or arresting the culture of the anthrax bacillus had been determined by Mr Blyth during the year 1883, and a paper giving full details of the experiments was published in the *Transactions of the Royal Society of Edinburgh.* A brief epitome of that paper is given in this article in the *Medical Times*, and from it we find some results which might not have been exactly anticipated. A one per cent. solution of carbolic acid, pure or commercial, or a similar solution of cresylic acid, had little or no action in modifying the development of the anthrax spores. A five per cent. solution of these acids merely delayed growth at first, but did not prevent it from being very active later. A twenty-five per cent. solution in alcohol did, however, render spores incapable of germinating. Carbolic acid powders (Calvert's, Jeyes', or M'Dougall's) have not much disinfecting activity, since a paste made of these and allowed to stand 24 hours in contact with anthrax material did not sterilize the anthrax. Sanitas is regarded as a good antiseptic, but no germicide. "Spores soaked in sanitas fluid for 24 hours grew afterwards very freely." The very non-poisonous character of sanitas is against any belief in its germicidal character. The permanganate class of disinfectants is only germicidal when concentrated and hot. In dilute solution Condy's fluid will kill only the more delicate and feebler forms of micro-life. Sulphurous acid acts on the more tender forms of micro-life. One part of sulphur dioxide in 666 of a cultivation fluid inhibited the growth of ordinary putrefactive bacteria, and vaccine matter mixed with a saturated solution of sulphurous acid seemed to become inert. Sulphur dioxide, however, decomposes sulphuretted hydrogen, and removes any smell due to the latter gas. Chloride of zinc takes a very poor place as a sterilizer. A one per cent. solution of this salt actually stimulated the growth of the anthrax spores. A five per cent. solution acting for 24 hours had no effect either way—a fact corroborative of Dr Koch's observation that anthrax spores placed for a month in a five per cent. solution of chloride of zinc grew and flourished well on their removal. A twenty-five per cent., however, seemed to arrest the life of the spores.—*Medical Times*, Oct. 11, 1884, p. 498.

PERISCOPE OF LARYNGOLOGY AND RHINOLOGY.

By G. Hunter Mackenzie, M.D., and J. Maxwell Ross, M.A., M.B.

Reflex Cough due to Nasal Polypi.—Several cases are recorded, presenting the essential features of reflex cough occasioned by the presence of polypi in the nostrils, and dissipated by ablation of the growths. The writer remarks that the dependence of *asthmatic* attacks upon the presence of polypi in the nasal chambers is sufficiently common; but the important *rôle* of the latter in the production of cough has apparently been overlooked. It would appear that the cough is only present when the growths spring from, or are brought in contact with, a portion of the erectile area, generally its posterior portion. The polypus would thus act as a mechanical irritant by causing engorgement of the mucous membrane and erectile cells, and thereby exciting reflex action. The probability of cough excitation, therefore, would depend, other things being equal, upon the position of the growth. Thus, for example, a polypus situated high up in the nostril may fail to give rise to the reflex act which its presence lower down in the nasal fossa would excite. Or a movable growth in the more anterior portion of the nasal chamber may awaken no reflex when the head is in the vertical position; but in the recumbent position the growth may, by force of gravity, be brought in contact with the posterior portion of the nostril, or, what is the same thing, with the most excitable spot in the sensitive area. In the same way, the asthmatic attacks which have been observed in connexion with nasal polypi may be explained.—*Transactions of the Medical and Chirurgical Faculty of Maryland*, 1884, by John N. Mackenzie, M.D.

(Asthma may depend not only upon polypus of the nose, but also upon chronic inflammation, as in the case recorded by Dr Hunter Mackenzie in this Journal (Feb. 1883), where an *atrophic* condition of the nasal mucous membrane was associated with, and apparently gave rise to, severe attacks of asthma. In view of this case, therefore, we are not disposed to consider the above theories as to the mode in which nasal polypi induce asthma as the correct, or at least the only ones.)

Irritation of the Sexual Apparatus as an Etiological Factor in the Production of Nasal Disease.—The writer gives the following data, derived from personal clinical observation:—

1. In a fair proportion of women suffering from nasal affections, the disease is greatly aggravated during the menstrual epoch, or when under the influence of sexual excitement. Occasionally the discharge from a nasal catarrh will become offensive at the menstrual epoch, losing its disagreeable odour during the decline of the ovarian disturbance. In most cases of ozæna the fœtor is much more pronounced, at times corresponding to those of the uterine flow (mentioned by Trousseau, *Clin. Med.* vol. iii. p. 70, New Syd. Soc. Edn.) 2. Excessive indulgence in venery seems to have a tendency to irritate inflammation of the nasal mucous membrane, or to aggravate existing disease of that structure. 3. The same is true of masturbation. 4. The co-existence of uterine or ovarian disease exerts sometimes an important influence on the clinical history of nasal inflammation. This fact has been illustrated in practice by cases in which the nasal affection has stubbornly resisted all treatment, until the recognition and appropriate medication of the generative apparatus.—*American Journal of the Medical Sciences*, by John K. Mackenzie, M.D.

CASE OF TUBERCULOSIS OF THE PHARYNX.—This occurred in a man, æt. 38, who had concomitant tubercular disease of the larynx, in whom the lungs were healthy. In the pharynx and on the palate were red œdematous patches, with very small ulcers in their centre. On the uvula were two symmetrical larger ulcers, with irregular infiltrated edges and cheesy contents. These had almost completely destroyed the uvula. In this case the laryngeal lesion was considered the primary one.—*Internationales Centralblatt für Laryngologie und Rhinologie*, January 1885. By E. Kurz.

(This writer has not satisfactorily shown that the lesions were tubercular. In neglecting to state whether the bacillus of tubercle was present or not, he made an important omission. The rarity of tubercular disease, and the greater prevalence of syphilitic affections, of this region, incline us to the view that the disease partook largely of a syphilitic element.)

CASE OF PRIMARY TUBERCULOSIS OF THE LARYNX.—This case occurred in a boy, aged 4½ years. He had first of all inflammation and suppuration of the tonsil, followed soon afterwards by inflammation and ulceration of the larynx. The lungs and intestines seemed quite free from disease. Shortly afterwards meningitis set in, which proved fatal. Necropsy showed tuberculous meningitis, with typical tuberculous ulceration of the larynx. In the ulcerated spots were numerous tubercle bacilli. The thoracic and abdominal organs were free from tuberculous disease. A few tubercle bacilli were found in the left retro-maxillary gland. The writer considers the infection of the retro-maxillary gland as the primary, and that of the intra-arytenoid region as the secondary lesion.—*Internationales Centralblatt für Laryngologie und Rhinologie*, January 1885. G. Jonquière, Bern. Original Report of Case by R. Demme, Bern.

TUBERCULOSIS OF THE LARYNX IN A CHILD FIVE YEARS OLD.—The diagnosis was undoubted in this case, for tubercle bacilli were readily found. Voltolini, who reports the case, believes that this is the first instance of tubercle bacilli being found in the larynx of a living child, and leading to a correct diagnosis of the disease. —*Internationales Centralblatt für Laryngologie und Rhinologie*, January 1885. B. Fraenkel.

(The microscopical examination of the laryngeal secretion in all cases of doubtful laryngeal disease, *e.g.*, syphilis, cancer, and tuberculosis, is highly essential, and no diagnosis can be considered trustworthy where this is omitted. This especially applies to the diagnosis of tuberculous disease, as pointed out by Dr Hunter Mackenzie in this Journal ("The Diagnostic and Prognostic Value of the Tubercle Bacillus," Feb. 1884, and "The Diagnosis of Laryngeal Tuberculosis, Nov. 1884.)

LARYNGEAL HÆMORRHAGE.—A case is recorded of acute laryngo-tracheitis, with rupture of small vessels, and subsequent hæmorrhage from the ventricular bands. The laryngoscopic characters were general congestion of the mucous membrane, with thickening and lividity of the ventricular bands, which were in part covered with fresh and dried blood. The superficial vessels of the congested mucous membrane could be easily seen as dark tortuous lines converging towards two bleeding spots seated symmetrically on the lateral surfaces of the ventricular bands.

The writer remarks that, independent of any extraneous cause or ulcerative action, laryngeal hæmorrhage is of rare occurrence. In expressing this opinion, he excludes all cases of hæmorrhage into the sub-mucous connective tissue, as occurs occasionally in variola hæmorrhagica and scorbutus. The few cases of laryngeal hæmorrhage of the above nature which have been recorded have been due to, or associated with, acute congestion or inflammation of the larynx.—*Chicago Medical Journal and Examiner.* By Jefferson Bettman, M.D.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. MILNE CHAPMAN, Inverness.

CLINICAL STUDIES OF OVARIAN FLUIDS, WITH SPECIAL REFERENCE TO THE DIAGNOSTIC VALUE OF TAPPING (H. P. Órum, *Habilitationsshrift*, Copenhagen, 1884).—After a short *résumé* of the previous and present value attached to diagnostic tapping, the writer faces the question of whether there is anything characteristic of ovarian fluid. His work deals chiefly with pseudomucine. He first refers to Hammarsteen's work, where it is shown that paralbumin is a mixture of albumen and pseudomucine (pseudomucine being Sherer's metalbumen renamed by Hammarsteen, because it is really not an albumenoid, but is more closely allied to mucine), and he then comes to the conclusion, partly from his own analysis, partly from a consideration of the literature of the subject, that pseudomucine is not characteristic of ovarian cystomata, but is pathognomonic of colloid degeneration, since he found it in the fluid of eleven cases of colloid cysts, and in the fluids of papillary growths it was only present when there was colloid degeneration, and then its amount was proportionate to the amount of degeneration. He neither found it in the Graafian follicles of the cow nor in cases of dropsy of the Graafian follicles in the human subject. In one case of colloid cancer it was present in large quantity. With negative results he examined two dermoid cysts, one fibro-cystic tumour, one hydronephrosis, and the ascitic fluid from eight cases. Twice he found it in ascitic fluid, but in both cases there had been rupture of ovarian cysts, as was shown at the respective operations. He has also found pseudomucine once in a colloid vaginal cyst, and once in a colloid growth in a new-born child. The method of examination employed in all the cases was that given by Hammarsteen. In the second part of the work the writer gives the complete chemical analysis of numerous fluids, ovarian and others, and compares his result in tables. Among other things he shows that in colloid cysts there is always present pseudomucine, seralbumen, and serumglobulin, mucin only seldom, and fibrin only when there has been twisting of the pedicle or recent hæmorrhage. Papillary growths contain but little or no pseudomucine (dependent on the presence or absence of colloid change, as already mentioned), but albumen in large quantity. The fluid in the cases of hydrops folliculorum, dropsy of the tubes, and in parovarian cysts, he found to be purely serous, and to contain no fibrin. In the fluid of 87 cases of fibro-cystic growths, spontaneous coagulation was found in 17. As a result of his examination of hydronephrotic fluid, he states that the presence of 0·2 per cent. of urine in a fluid may be considered as pathognomonic of the renal origin of the tumour from which it was taken. As to the fluid of hydatids, he lays stress on the presence of succinic acid and inosite, and the absence or small quantity present of albumen. In the case of ascitic fluid he notices that fibrin may be absent though albumen be present even in considerable quantity. He has not been able to recognise anything specially characteristic in the fluid present in the abdomen in cases of ovarian or uterine tumours. In addition to the consideration of the chemical composition of the various fluids, the writer carefully describes and figures the microscopic appearances of the deposit in each instance.

ARE HOT OR COLD INJECTIONS THE MORE USEFUL IN CASES OF BLEEDING FROM THE UTERUS? (E. Schwarz, *Centbl. f. Gynäk.*, 1884, No. 16).—The writer states that of late his faith in the superiority of hot water injections over cold to control uterine hæmorrhage has been shaken, and especially by the following two cases:—1. A

30 years' old primipara, one hour after the birth of the child, and quarter of an hour after the spontaneous and complete expulsion of the placenta, was found anæmic, with the uterus reaching up to the umbilicus. A large quantity of blood-clot was removed, and hot carbolic irrigation employed, with the result of stopping the bleeding. The writer then proceeded to stitch up the perinæum, and when this was being done the bleeding returned, and was again stilled by hot injections, only to return again in five or ten minutes, and this time hot water failed to check it. As the supply of hot water was finished, ice and ice-cold injection was used, and the uterus then firmly contracted, and bleeding was at an end. The second occurrence was after the fourth confinement of a 26 years' old patient, which occurred at the seventh month, there being a syphilitic history. Portions of the placenta had been left behind, and when the writer saw the case she was collapsed and restless, with weak pulse and cold extremities. Chloroform was given, and the uterus emptied of placenta and a large quantity of blood-clot. Hot carbolic irrigation was employed, and the uterus contracted fairly. In a few minutes bleeding recommenced, and was again controlled in the same way, but speedily returned. Simple cold water without ice was then used, and the bleeding was thus finally arrested. Since the occurrence of these two cases Schwarz has always used cold water to control hæmorrhage, and he finds that the results are more sure and more permanent than they are after the use of hot, not only in puerperal cases but also in gynæcological. He does not believe that serious inflammatory mischief is likely to be set up by the use of cold water in bladder or uterus, and he attaches little importance to the loss of animal heat occasioned by its use, as he regards it as trifling. Hot water he regards as likely to be dangerous, either when it is not hot enough or when it is too cold,—in the former case making the uterus flabby and adding to the bleeding, in the latter tending to produce irreparable paralysis of the muscular fibres, this having occurred in a case which the writer mentions. The use of cold water presents no such difficulties, as though ice-cold is preferable, good results may be obtained from the employment of ordinary tap-water. He notes, too, that after the use of hot-water injections there are few after-pains, and these feeble, while after the cold the pains are strong and frequent, showing the superior effect of the latter in increasing uterine contraction.

IBID. (Graefe, *Ibid.*, No. 21).—The writer first reports a case quite analogous to the two given above by Schwarz. He also gives a case of bleeding eight days after confinement which cold water failed to check, but which yielded on the use of a hot injection, and refers to three similar cases from recent literature. He would regard Schwarz's cases and his own first one, rather as accidents than as indicating the tendency of hot water to check bleeding only for a time, and thinks that had the use of hot water been continued simply on account of its novelty, and not of its worth, similar cases in great number would already have been reported. He gives it as his experience that not only does hot water check bleeding more quickly than cold, but also more effectually, and states that when he was using cold water he frequently had to have recourse in addition to perchloride of iron and long-continued friction of the uterus, but that now he uses hot water, and finds it sufficient.

ON THE USE OF CORROSIVE SUBLIMATE (Tänger, *Centbl. f. Gynäk.*, No. 31, 1884).—The writer fully details his experience, and comes to the following conclusions:—The sublimate must in each case be used with the greatest caution. Symptoms of absorption have undoubtedly occasionally shown themselves after the use of the sublimate in vaginal or intra-uterine douches, but these are usually slight, and rapidly disappear on the cessation of its use, and no bad effects are left behind. In view of the excellent results from the use of the sublimate, and the very slight element of danger in its use, he would regard it as the best disinfectant for obstetric cases.

STADFELDT ON THE USE OF CORROSIVE SUBLIMATE IN OBSTETRIC PRACTICE (*Centbl. f. Gynäk.*, No. 18, 1884).—The writer refers to the numerous criticisms that have been passed on his report of a fatal case following the use of a mercurial douche (which case with some of the criticisms has been reported in the periscope); and he adheres to his opinion that death was caused by the mercurial poisoning, though at the commencement shock phenomena may have been mixed up with the special symptoms, which latter, too, he regards as differing materially from those occurring in other forms of mercurial poisoning, and in conclusion, he says, that on the whole he is not opposed to the use of corrosive sublimate as a disinfectant in obstetric practice, still he regards it as a dangerous substance which requires great prudence in its use, greater prudence at anyrate than is to be expected from midwives.

ON THE EFFECTS OF PILOCARPINE AND ATROPINE ON THE SECRETION OF MILK (Hammerbacher, *Pflüger's Archiv f. Phys.*, Bd. xxxiii.)—According to the writer's observations, the use of pilocarpine causes an immediate diminution in the quantity of milk secreted, and such milk is poorer in quality than usual, but in twenty-four hours the quality returns to the normal, even though the use of the drug be continued, while the quantity remains low; but this latter fact the writer attributes to the disturbing effect of the drug on the general health. He was unable to notice any traces of pilocarpine in the milk secreted. The dose used was 0·15 grammes. Atropine diminishes the quantity and alters the quality by increasing the proportion of solids and of fats, this alteration, however, only lasting for seven hours, though the diminution in quantity is permanent, while the drug is employed, for reasons—according to the author—similar to those mentioned above as applicable to pilocarpine.

MENSTRUAL ERYSIPELAS (Godot, *Thèse de Paris*).—From his own experience, and his reading, the writer describes this affection as coming on at any period during menstruation or before its commencement, and as being sometimes like true erysipelas, and having all its associated local and general accompaniments, at other times occurring as slightly erysipelatous œdema with fewer local manifestations, and with less marked or sometimes no affection of the general system. The first form he regards as true erysipelas, the second as being similar to the stomach hyperæmia and hæmoptysis which occasionally occur during menstruation, and as being, like them, due to disturbances of the nervous and vascular systems and alterations in the blood pressure. Both forms end unfailingly in recovery.

THE TREATMENT OF PUERPERAL FEVER WITH COLD BATHS.—M. Chobert, an abstract of whose inaugural thesis is given in *Lyon Médical*, draws the following conclusions from a number of observations made by him at the Lyons *Maternité*:—1. Cold baths can be safely administered in the puerperal state. 2. They are indicated in all cases of puerperal trouble attended with high temperature, with the exception of acute peritonitis. 3. We should begin with a bath of 28° C., and gradually lower the temperature until 18° C. is reached. 4. The baths are to be repeated every three hours until the temperature of the patient has fallen to 38° C., and remains there with slight evening oscillations. With the baths large doses of alcohol are to be administered. The diet should be principally of a liquid nature.

THE DIAGNOSIS OF PREGNANCY IN THE EARLY MONTHS (*Prag. Med. Wochenschrift*, No. 26, 1884).—Prof. Hegar, of Freiburg, in an article on this subject, says that the usual diagnostic signs of pregnancy, a change in the general state, suppression of the menstrual flow, changes in the breasts and genital organs, the enlargement of the uterus and changes in the cervix are, as we know, uncertain in many cases. It is, therefore, important to know some constant symptom.

This constant symptom, he says, consists in a particular softness, a certain suppleness and thinness of the lower segment of the uterus, that is to say, the part immediately above the insertion of the sacro-uterine ligament. This may be easily determined, not only when the uterus is resistant, but even when it is soft and elastic. In the latter case it is possible, by depressing the uterus, to distinguish the upper portions and the rigid cervix. This portion is so soft that it seems as though the cervix is in contact with a pelvic or abdominal tumour. There seems to be no pathological state which gives rise to this sign, not even hydro- and hæmatometritis. The cause of this sign lies in the fact that the lower segment of the uterus becomes the thinnest part during pregnancy, and consequently softer and more elastic; and by combined rectal and vaginal examination it is possible to distinguish this part, with its characteristic feel, between the fingers. It should be remarked that the absence of this sign is not a proof that pregnancy does not exist.

Part Fifth.

MEDICAL NEWS.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 4th December 1884 and 8th January 1885, and were duly admitted L.R.C.P. Ed.:—Charles Booth Meller, Isle of Wight; William Henry Bullis, Ontario, Canada; Frederick Richard Anness, Rutland; John Hall White, Manchester; John Thomas Laud, Rochdale; Richard Bertram Eskrigge, Stockport.

The Loneliest Doctor in the World is the ophthalmologist who hasn't written an article on cocaine.—*New York Medical Record.*

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Part First.

ORIGINAL COMMUNICATIONS.

I.—NOTE OF A CASE OF DECAPITATION.

By J. Halliday Croom, M.D., F.R.C.P.E., Physician to the Royal Maternity Hospital; Assistant-Physician for Diseases of Women, Royal Infirmary; Lecturer on Midwifery and Diseases of Women, Edinburgh.

(*Read before the Edinburgh Obstetrical Society*, 14*th January* 1885.)

Version is generally one of the easiest of obstetric operations, and even in advanced shoulder cases so generally successful, that records of cases where all attempts to turn prove unavailing are comparatively rare. In fifteen years, including dispensary, hospital, private and consulting practice, until now I have not met with a case where I have found it impossible to turn; and the hospital books for many years back show no report of such cases.

I presume that cases where turning is impracticable must occur more frequently in country than in city practice, owing to the length of time labours are often allowed to go on in the hands of midwives, and the distance before skilled assistance can be got. In any case I have thought that the following report might not be uninteresting to the Society:—

Mrs J. S., a iv.-para, whose previous labours had all been forceps cases, went into labour on the morning of Thursday. She was attended by a midwife. The labour went, so the attendant said, on very slowly for some days, slight pains coming on at intervals. On Monday morning the membranes ruptured, when the pains became very strong and continuous. In the afternoon of the same day, as the labour was apparently not making any progress, she sent for the assistance of my friend Mr Grant. On his arrival he found the pains strong and almost continuous, the patient very weak and exhausted, and on vaginal examination found a hand presenting at the vulva. He did not attempt to turn, but sent for the aid of a neighbouring practitioner. After giving the patient a stimulant, and placing her deeply under chloroform, version was carefully attempted, and after prolonged efforts was abandoned as impossible. Before any further interference was undertaken, I was consulted in the matter. I saw the woman about 10 o'clock P.M. I found her exhausted; pulse about 130, small and weak. No fœtal heart sounds. She had come out of the chloroform. External palpation was difficult, the uterine ovoid being extremely hard; but the head was recognised lying in the left iliac fossa. Careful examination was made with regard to this condition of the cervix. The line of demarcation between cervix and body could not be felt. On vaginal examination the right hand, quite discoloured, was found protruding at the vulva. The position was therefore left cephalo-iliac, right acromio-anterior.

The right shoulder was well down and jammed in the brim, the axilla and ribs were easily recognised, and the head was reached high up and to the left. The uterus was firmly contracted round the fœtus.

Although the case certainly did not offer much inducement to attempt turning, yet from experience of former difficult cases, where the free administration of morphia and chloroform had so relaxed the uterus as to make the introduction of the hand possible, I resolved to give version a further trial. A ¼ of a grain of morphia was injected hypodermically, and shortly after patient was placed profoundly under chloroform. I perseveringly tried to introduce my hand to seize a foot. I found it impossible to get the tips of my fingers beyond the neck. The contraction of the uterus was so firm that I could scarcely move my finger in utero at all. After repeated efforts I desisted. In the meantime I had sent a note to my friend Dr Milne Murray, asking him to let me have the necessary instruments in case of failure. Unfortunately he misread my note, and brought only the ordinary instrument for craniotomy. As the condition of the patient would not admit of further delay, we at once proceeded to break up the fœtus. Two courses were open, either to perforate the chest and spine, or else to decapitate. As the neck was accessible and involved less cutting, and was more cleanly, the latter was selected. For want of any of the ordinary instruments for the purpose, I was obliged to use the ordinary perforator. While Dr Murray made steady traction on the arms so as to bring the neck to within as easy reach as possible, I introduced the perforator between the sixth and seventh cervical vertebræ, and after very considerable difficulty succeeded in cutting through the neck, the structures that offered the most resistance being the anterior ligaments.

Further traction was then made on the arm, and the trunk of the child was dragged through by means of the crotchet fixed in the medullary canal. The uterus remained firmly contracted on the head. Supra-pubic pressure was made to expel the head; but as this did not at once succeed, and as the woman's condition was extremely critical, to save further time and effort I put on the cephalotribe, crushed the head, and extracted it. The uterus remained firmly contracted over the placenta, which was expelled in a few minutes. There was no hæmorrhage. The uterus remained extremely hard. The uterine cavity and vagina were washed out with antiseptics. The patient remained weak and almost collapsed for some hours, but next morning she had recovered, and has since made an uninterrupted recovery. On examination after delivery, the pelvis was found to have a conjugate of 3¼ inches.

The case I have just related presents several points of interest, and some for criticism. In the first place, it is worth remarking the extreme rarity of such a complication in the practice of our Maternity Hospital, where for the last twenty years I have been unable to find the record of more than a single case,—a fact which goes to show that in the hands of medical students able to diagnose a presentation, assistance in such cases is early sought for, and version, therefore, seldom impracticable.

Wherein lay the difficulty in turning in the present case? Three factors were involved.

1st, The low impaction of the shoulder.

2nd, The narrow pelvis; and,

3rd, The firm tetanic contraction of the uterus.

Of the three factors the uterine contraction was by far the most serious difficulty. I could get with care and patience through the narrow brim and beyond the shoulder; but whenever my hand got within the uterus, the contraction excited, no doubt, dynamically, became stronger, and the onward advance of my hand was rendered impossible—the uterus became, as it were, moulded over every part of the child's body. On feeling the uterus externally with the free hand, one could trace the irregular outline of the uterus over the fœtal body.

I have believed and taught hitherto that morphia and chloroform combined overcame this tetanic contraction, and my experience till now in bad shoulder cases, even with the arm prolapsed, has justified me in so teaching. In the present case no effect was produced on the uterus by either of these drugs.

In such a case is it worth while trying to turn? I confess I scarcely think it is. The risks attendant upon version in such cases are much in excess of those accompanying embryotomy. Although my own experience in bad shoulder cases with the arm prolapsed, has hitherto been successful so far as version is concerned, yet in two of these cases the child was dead, and in the third the patient made a protracted recovery. It therefore seems to me that when the uterus is firmly moulded round the child, when the liquor amnii has long escaped, when the shoulder is engaged and the hand presenting at the vulva, in the interests of the mother the child ought to be sacrificed; for at full time spontaneous delivery is not to be expected. It must be kept in view that the diagnosis of the life of the child by means of the stethoscope is difficult, if not impossible, owing to the contraction of the uterus and the position of the child. My own opinion is, that often too much importance is attached to the delivery of a living child. In such cases as the present, where at the best the child's chances are extremely small, I should be inclined to advocate an early recourse to embryotomy. The means at our disposal for accomplishing this end are practically three:—1st, Evisceration of the abdominal and thoracic cavities sufficient to allow version in the faulty portion, by bringing the pelvic extremity down, and thus imitating spontaneous version; 2nd, Spondylotomy, *i.e.*, complete division of the spinal column; and, 3rd, as in the present case, decapitation. When the neck can be reached, the operation seems to me the most satisfactory, being cleaner, quicker, and easier than any of the other two. The severance of the cervical column can be accomplished in several ways, either by Braune's hook, by the ecraseur, by the whipcord saw, or by scissors. Where Braune's decollator is at hand, it is no doubt an excellent instrument for the purpose. The record of many cases managed in this way seems to speak strongly in its favour. Judging by the present case, the use of the ecraseur or the whipcord saw would be impossible, owing to the insuperable difficulty of introducing the hand far enough into the uterus to allow of the chain or cord being thrown round the neck. A pair of scissors, or as in this case the perforator, seems to me more simple and equally effectual. The prolapsed arm aids greatly in drawing the neck within reach and fixing it while the operation is in progress, and also in extracting the body after the decapitation is completed.

Of course cases will occur where it is impossible to reach the neck, and in such circumstances one of the two former procedures becomes necessary; but the pelvis must be small, and the shoulder very completely jammed, where traction on the arm will not bring the neck within reach. With regard to the delivery of the after-coming head, much will depend on the condition of the patient. Supra-pubic pressure will in this, as in the after-coming head in breech cases, be usually sufficient. In cases, however, such as the one under consideration, quick delivery with as little pressure on the already tender uterus as possible will be indicated. The forceps, crotchet, or cephalotribe afford a ready means of accomplishing this—and of these the cephalotribe when at hand appears to me to be the most satisfactory.

II.—ON THE PREVENTION OF LYING-IN FEVER.

By Vassily Sutugin, M.D., Physician to the Court of H.M. the Emperor of Russia, Lecturer on Midwifery and Gynæcology at the Imperial Medico-Chirurgical Academy of St Petersburg. Translated from the Russian by G. L. Carrick, M.D.

(*Read before the Edinburgh Obstetrical Society, 10th December* 1884.)

The high rate of mortality that had long been observed to follow childbirth—greatly exceeding the number of deaths from cholera and small-pox together—and the futility of therapeutic remedies in combating puerperal fever, clearly proved that the efforts of the accoucheur should be directed towards discovering a means of preventing the disease. Some of the greatest minds in the profession throughout the civilized world have been trying to attain that object, and their united labours have been followed by results that, fifteen years ago, would have been considered unattainable. With the view of demonstrating these facts more clearly, I shall cite the rate of mortality before and after the introduction of a more careful prophylaxis (*i.e.*, the use of antiseptics) in the management of the puerperal state. Thus in Bischof's clinic in Bâsle the mortality in 1868 was 6·4 per cent., or 1 in 16; after the introduction of the antiseptic treatment in 1882, 1·6 per cent., or 1 in 63. In the Maternité in Paris, from 1858 to 1870, the deaths were 9·31 per cent., or 1 out of 11; since the introduction, according to the recommendation of Professor Tarnier, of certain prophylactic remedies—such, for instance, as the exclusion of pupils who had been assisting at post-mortem examinations, and the employment of certain antiseptics—the mortality fell, from 1870 to 1881, to 2·32 per cent., or 1 in 43. According to the latest reports, the death-rate was 1 per cent., or 1 in 100. In a private ward of Professor Tarnier the mortality up to 1879 was barely 0·5 per cent., or 1 in 200; while, after the adoption of stricter prophylactic remedies, it fell to 0 per cent. out of 608 deliveries.

In the Paris Lariboisière the death-rate in 1862 was 7 per cent., or 1 in 14; after the introduction of antiseptics, in 1882, 1·6 per cent., *i.e.*, 1 in 63. In the Berlin Charité, according to Gusserow, the mortality, prior to the use of prophylactics, *i.e.*, from 1859 to 1860, was 16 per cent., or 1 in 6. Subsequently, after the employment of certain disinfecting remedies, in accordance with the teaching of Ign. Semmelweiss, it fell, in 1874, to 4·4 per cent. With a still stricter prophylaxis, it was reduced, in 1881, to 0·9 per cent., or 1 in 111. The results were the same in most of the clinics and lying-in hospitals of Germany. At the present moment, in many of them the percentage of deaths keeps at about 0·5 per cent. In St Petersburg, according to the reports of the Lying-in Hospital in connexion with the Foundling House, the death-rate, from 1870 to 1871, was 3·7 per cent. In 1873 it was 3·5 per cent.; in 1875, 0·7 per cent.; in 1876, 0·8 per cent.; *i.e.*, before there died in childbirth 1 out of 27, while after the adoption of certain prophylactic measures there died but 1 in 143.[1] Although the death-rate is not a fully just criterion of the well-being of lying-in hospitals, yet it supplies us with a pretty fair means of judging the comparative merits of the different remedies employed for preventing puerperal fever.

The use of prophylactics after delivery has been intimately connected with our gradually acquired knowledge of the nature of so-called puerperal fevers, as well as with a more intimate acquaintance with the process of putrefaction and the methods of preventing such putrefaction (antiseptics). The first clear idea of the nature of puerperal fever was enunciated by the illustrious Semmelweiss in 1847. He also was the first to direct attention to preventive measures. The essence of his teaching was, that puerperal fever is the result of the introduction of putrefying matters (particularly those of decaying animal bodies) into the wounded generative organs of the child-bearing female. But although he succeeded in gaining over to his side such eminent contemporaries as Skoda, Rokitansky, and Michaelis, yet, owing to many extraneous circumstances, he was unable to spread his teaching sufficiently far and wide. The proof of the wonderful influence he had on some of his followers is seen in the tragic end of Michaelis.[2]

Semmelweiss' teaching did not take as firm root, however, and did not do as much good as its author expected,—probably because the learning of the day in regard to putrefaction was far inferior to his enlightened views. It cannot be said that his teaching fell into thorough oblivion; on the contrary, it was resuscitated on the appearance of every new epidemic of puerperal fever; and even with us (in Russia) before the spread in surgery of the Pasteur-Lister doctrines, it was particularly insisted upon at the meetings of our St Petersburg Obstetrical Society, and was warmly defended and propagated by Dr Hugenberger. Those accoucheurs who became believers in the teaching of Semmelweiss shunned post-mortem examinations, so as to avoid introducing a putrefactive poison into the system of those they attended in childbirth.

The introduction into surgery of the theory of blood-poisoning from without, and the prophylaxis of putrefaction in general, gave a new impetus to the placing of Semmelweiss' theory on a more

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[1] In the lying-in hospital to which I am attached the deaths during the first four years equalled 0·8 per cent.; after I resorted to the strictest prophylaxis, it fell to 0 per cent.

[2] Dr Michaelis, after having made a post-mortem in a case of death from puerperal fever, delivered a relative of his, who succumbed to the same malady. Considering himself the murderer of the deceased, Michaelis committed suicide by throwing himself under a railway engine (Ignatz Semmelweiss *v.* A. Hegar, 1882, p. 18).

scientific basis, coupled as it was with new methods of research. I do not consider it necessary here to enlarge upon the history of the growth of our present views regarding what is the essence of so-called puerperal fever, but will simply remark that at present the conviction is firmly established that puerperal fever, without constituting a specific disease, is simply a species of blood-poisoning, caused by the importation of putrefactive poison from without, or by the generation of such poison independently of any external agency within the patient's body, *i.e.*, auto-infection.[1]

The lying-in woman has been compared to a wounded individual, and most puerperal diseases are considered traumatic inflammations, in which case the wound may be self-constituted, *i.e.*, produced by the physiological progress of the labour, or artificial, *i.e.*, produced by the hand or instruments of the accoucheur. From this class of puerperal maladies, commencing as a rule during the process of labour, although evincing signs of their presence in from one to two days, were separated, the *later affections* dependent upon abnormal retrogressive development of the uterus, and the arrest of its discharges, and leading to so-called *auto-infection*, *i.e.*, cases of atonic womb.[2] These are still disputable forms of disease, although they undoubtedly differ from ordinary cases of blood-poisoning. In these cases, according to some authors, the germs of the infection enter the generative organs several days only after childbirth, in consequence of incomplete closure of the generative track, while, according to others, the germs are conveyed during the process of labour, although, for reasons unknown to us, they do not show signs of their existence until seven, eight, or even ten days subsequent to parturition. To the third category of puerperal fevers must be referred cases of chronic peritonitis and suppurating salpingitis,[3] which pass into the acute stage from a simple (*i.e.*, without the introduction of putrefying matter) post-partum wound, but which run the ordinary course of blood-poisoning after childbirth. What are the qualities of the contagious putrefactive matter, *i.e.*, whether its action is chemical (belonging to the class of so-called ptomains), or whether suppurative micrococci (contagium animatum) play the chief part therein, is still an open question, in spite of the great efforts made to elucidate the subject. The discovery of micrococci by Waldeier[1] in peritonitic effusions, the lymphatic vessels, and the tissues of lying-in women who succumbed to *septicæmia*, and by Pasteur in their blood, as well as the artificial culture of these micrococci, and the inoculation of animals by Doleris,[2] Karewski,[3] and Prof. Chauveau,[4] have led to no decided results, although Doleris worked under the guidance of Pasteur, and Karewski under that of Virchow and Schröder, and in the same city with Koch. One thing, however, has been made clear by their observations, viz., that the excitants of putrefactive contagion are really discoverable in the secretions and exudations of puerperal women. Karewski, in particular, frequently found small, spherical, peculiarly characteristic micrococci, remarkable for their equality in size, while Doleris found that species of micrococci the most malignant which is distinguished by its large size and remarkable brightness (shininess). There has even been a special micrococcus described as the micrococcus puerpuralis first discovered by Coze and Fellz (Chauveau, *loc. cit.*), and inoculated on animals by Pasteur. Prof. Chauveau became so enthusiastic a believer in this specific micrococcus, that he even proposed employing it for prophylactic inoculation. But the observations of others did not confirm the existence of this micrococcus. Meanwhile, the experiments of Panum in regard to boiling putrefactive poisons, and also those of Rosenberger[5] and Zweifel,[6] speak in favour of the chemical action of suppurative poisons (of the ptomain order).

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[1] Dr Tiede, "Ueber Atonie des Uterus, im Wochenbett," *Berliner Klin. Wochenschrift*, 1881, No. 39, p. 555. J. Veit, "Ueber Puerpurale Infectionen mit ängeser Incubation," *Zeitscr. für Gebürtshülfe und Gynæk.*, vol. vi. p. 378. Wiener "Uber Späterkrankungen in Wochenbett," *Centralblatt f. Gynækol.*, 1882, No. 11. P. Muller, *Archiv. f. Gynæk.*, vol. xx. p. 321.

[2] I have treated this subject fully and in detail in my *Report of the Lying-in Department of the St Petersburg Foundling Hospital for the year* 1882, p. 144; it has also been admirably handled by Prof. Rein in his lectures on "Antiseptics in Obstetrical Practice," published in the *Meditsinsky Vestnick* (*Medical Messenger*).

[3] Fehling, "Ueber Schwere, nichtinfectiöse Puerpural Krankungen," *Centralblatt für Gynæk.*, 1883, p. 12. Voskresensky, "A Case of Intestinal Rupture," *Vratch*, No. 5, p. 75.

Leaving the final decision of this question in the hands of experimenters, the clinical physician or practitioner should at present base his practice upon his personal observations. The introduction of prophylactic measures against the possible influence of animated contagions (contagii animati) led to a decided diminution both of infection and of death-rate among child-bearing women. The same was observed in regard to all wounds, and the practitioner is therefore justified in accepting the theory *of puerperal fever being carried to the patient from without* (the extraneous theory), and *in doing his utmost to prevent the contagium animatum*, not forgetting, however, that the cause of putrefactive changes may also be chemical. Most modern authorities on midwifery believe the puerperal poison to be a *contagium animatum*,[1] while also acknowledging the possibility of infection from all putrefying matters. They do not, therefore, regard puerperal fever as a poison essentially *sui generis*, and transmittible only through one infected lying-in woman to another. Moreover, Spiegelberg[2] and Gusserow[3] (and I also incline to that opinion) acknowledge the necessity, for purposes of prognosis, of dividing puerperal disease into traumatic and putrefactive. The former is remarkable for its milder course and favourable termination, and the absence of signs which prove the introduction of putrefying matter; in other words, it is a non-putrefactive, inflammatory form of disease. The latter, or putrefactive class of these diseases, is distinguishable by the sharply-defined fever of septicæmia, or pyæmia, or the mixed form of septicopyæmia.

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[1] Waldeier, "Bacterien bei Puerpuralfieber," *Archiv f. Gynæk.*, vol. iii. p. 293.

[2] Doleris, "La fièvre puerpurale et les organismes inferieurs," *Thèse de Paris*, 1880.

[3] Karewski, "Experimentale Untersuchungen über die Einwirkungen Puerpurale Secrete auf den Thierischen Organismus," *Zeitschr. f. Geburtsh. und Gynæk.*, 1882, vol. vii. p. 331.

[4] Chauveau, "Sur la septicemie puérpurale expérimentale," *Archives de Tocologie*, 1883, p. 52.

[5] Rosenberger, "Uber das Wesen des Septischen Giftes, Festschrift zür Feier des 400 Jährigen Bestehens der Julius Maximilian Universität zu Würzburg."

[6] Zweifel, "Untersuchungen über die Wissenschaftligen Grundlagen des Antisepsis und die Enstehung des Septischen Giftes," *Zeitschr. für Physiolog. Chemie*, vol. vi.

The extension of our knowledge of puerperal fever served to simplify the means of combating it; it became possible successfully to apply preventive measures. Modern obstetric literature abounds with prophylactic post-partum remedies. In our St Petersburg Obstetric Society a whole series of meetings and debates were devoted to this question. In my published report on the St Petersburg Lying-in Hospital, the necessity of applying antiseptic remedies during parturition was clearly pointed out; moreover, there appeared a translation of Zweifel's[4] pamphlet into Russian, Dr Dobronravof's communication headed, "Lister's Principles as Applied to Obstetrics," and Prof. Rein's lectures *On Antiseptics in Midwifery*.

The anti-putrefactive (antiseptic), or, more correctly, the preventive method, consists of the sum total of a number of measures, ranging from the room in which the parturient woman is placed to the minutest details regarding the nursing of the patient. In obstetric antiseptics it is imperative not only to adopt all measures tending to destroy contagion from without, but also to remove all conditions that tend to encourage its development within the generative organs of the child-bearing woman.

In surgery, according to Professor Bergmann,[5] the adoption of the following four chief antiseptic measures (besides cleanliness of wards, instruments, and attendants) is considered necessary.

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[1] Prof. Gusserow, "Ueber Puerpural Fieber," *Berliner Klinische Wochenschrift*, 1882, No. 32, p. 482. Also see author's statements, made eleven years ago, in his *Report on the St Petersburg Lying-in Hospital for* 1872, chapter on Puerperal Diseases, p. 370.

[2] Spiegelberg (*Berliner Klin. Wochenschr.*, 1881, No. 22, p. 309) considers use of drainage sensible, but of doubtful utility where the parts are regularly irrigated.

[3] Gusserow, *Berlin. Klin. Wochen.*, 1882, No. 32, p. 489.

[4] *How to Prevent Infection after Childbirth*, by Prof. Zweifel. Translated by Prof. Slaviansky, 1880. Designed chiefly for the use of midwives.

[5] Bergmann, "Ueber Antiseptische Wundbehandlung," *St Petersburger Medicinische Wochenschrift*, 1882, No. 43, p. 368.

1. *The smallest hæmorrhage possible* into the wound, because the extravasated blood supplies nourishment to the excitants of putrefaction. (This end is attained by ligature of, or pressure on, the vessels.)

2. *Limiting the exudation of blood serum into the wound*, as it also serves as food for bacteriæ. (This is attained by drainage.)

3. *Bringing the incised parts neatly and firmly together* by careful stitching and absolute rest of the wound.

4. *The destruction of those excitants of putrefaction that are introduced from without.*

This latter condition is hardly attainable by Lister's, or by the improved dressing, as this dressing simply prevents the birth of new units of infection (spores), but does not kill those already present.

It stands to reason that the carrying out of all these antiseptic measures demands a thorough acquaintance with the details of operative surgery, and extensive general professional knowledge. Supplying soldiers with carbolized bandages cannot be classed among trustworthy antiseptic remedies. Measures like the above, or even still more complicated ones, must be introduced into obstetrics, for the fact of providing midwives or nurses with carbolic acid is by no means a guarantee of antiseptic treatment being carried out. Unfortunately, during labour the practical application of the rules of antiseptic surgery is not so easily attainable. To begin with, during the act of parturition, which is a physiological process, nature in most cases operates herself, producing a self-inflicted post-partum wound. The hæmorrhage resulting therefrom she also arrests by the contractions and elasticity of the womb, and partly by the contractility of the lacerated membranes of the genital passages. The accoucheur has in the majority of instances to assist the natural progress of labour, and only rarely to operate in a surgical sense (incisions of the neck of the womb, stitching a lacerated cervix uteri or perinæum). Drainage tubes for removing the lochiæ after natural labour can only interfere with uterine contraction, and can even conduce towards the entrance of the germs of infection into the cavity of the womb. They are of use in those cases only where putrefactive changes have already commenced, as in the post-partum discharges of endometritis. The prophylactic drainage tube is condemned by most accoucheurs, while intra-uterine injections are not only in disuse, but are even considered dangerous. Gusserow (*loc. cit.*), Hoffmeier,[1] Fischel,[2] Egli, Sinclaire, and before their time most of the members of the St Petersburg Obstetrical Society, urgently protested against intra-uterine syringing, which Dr Radetsky diligently employed in one of our St Petersburg maternities.

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[1] Hoffmeier ("Uber den Werth Prophylaktischen Uterus Ausspüllungen gleich nach der Geburt," *Zetschr. f. Geburtsh. und Gynæk.*, vol. v. p. 175) admits the utility of intra-uterine injections only in tympanitis of the uterus during labour; in healthy labour he considers them injurious.

[2] Fischel ("Zur Therapie der Puerpuralen Sepsis," *Archiv f. Gynæk.*, vol. xx. p. 1), after repeated resorts to intra-uterine therapeutics in Prague, found the mortality after childbirth rise from 0·4 to 1 per cent. After abandoning intra-uterine injections the mortality at once fell to 0·2 per cent.

For the same reason the resort to antiseptic plugging of the os, even with iodoformized tarlatan, as suggested by Dr Rein, is dangerous. Gusserow is a particularly strong opponent of this method, the more so as the plug, after having been some time in the uterine canal, becomes rather an excitant than a preventive of infection. The use of Lister's bandages is inapplicable in midwifery, and can easily be replaced by another, presently to be considered, method, which does not interfere with the post-partum discharges. The prophylactic measures in midwifery should be confined chiefly to the condition of the lying-in room, to pedantic cleanliness in the accoucheur and all the attendants, as well as surroundings, to careful nursing of the gravid as well as parturient woman, and lastly, to a strict use of disinfectants during and after labour.

The Lying-in Chamber.—In private practice it is necessary to select the airiest room, and one with plenty of light in it. To remove the presence of any existing germs, the carpets and furniture had best, before labour sets in, be well cleaned with a damp towel. In cases, however, where a suspicion exists of the presence of the germs of any specific poison, such as scarlatina or diphtheria, the chamber must be disinfected firstly by chlorine, and then, just before the removal of the patient, a spray of 5 per cent. of carbolic acid, or better, $\frac{1}{10}$ per cent. of corrosive sublimate, should be resorted to. In lying-in hospitals and in infirmaries it is absolutely necessary that labour should take place in a room set apart (and well aired) for each patient. It is difficult, nay, as a rule impossible, to trace the importation of infection during parturition, when several women are almost simultaneously delivered in one large ward. Separate lying-in rooms have this advantage over general wards, moreover, that the appearance of, for example, endometritis in partu in but a single patient would necessitate the closing of a whole ward in one instance, and would thus deprive many women of the use of the maternity, while in the other case the temporary loss would be confined to a single room. On the appearance of post-partum infection, the room where labour took place should be disinfected either with chlorine—as one of the best of antiseptics—or by sulphurous acid (the burning of sulphur in the room) during at least from six to eight hours, or, when practicable, by the use of steam. The latter remedy is as yet inapplicable to most of our maternities. The floors should be washed with a 10 per cent. solution of carbolic acid, or, what is better and cheaper, $\frac{1}{10}$ per cent. of corrosive sublimate. Only after long continued airing of the room, subsequent to the above measures, can a new patient be admitted within its walls. Operations, when many onlookers are present, should be performed in a large ward, where carbolic acid or corrosive sublimate spray has been largely used as a preliminary measure. The attendants, as well as all articles of the lying-in chamber, should not be brought in contact with patients already delivered; sick parturient women should be kept in a different part of the building from the healthy; the rooms for those awaiting their confinement should be as large and light as for those already in labour.[1] The patient should not be left in the lying-in ward longer than two hours after delivery—only as long, in fact, as is required for watching the contractions of the uterus.

The physicians and all attendants should be fully impressed with the importance of antiseptic measures, and should, in their persons, be scrupulously cleanly. The accoucheur should have a special suit for visiting puerperal patients, and the best thing to wear on entering the lying-in ward is a linen apron over one's coat and trousers. It would be desirable to see the nurses dressed in some light material that can easily be washed, such as chintz, for example.

Particular attention should be paid to washing the hands in some antiseptic solution, and to carefully cleaning the nails with a brush, before every examination per vaginam. Chlorine water, a 5 per cent. solution of carbolic acid, and what is in special favour of late, $\frac{1}{10}$ per cent. of corrosive sublimate (Koch, Tarnier), are considered the best antiseptics. While midwives or nurses are in attendance upon a puerperal patient, they should be strictly prohibited from taking any new case; where, however, the demand is in excess of the supply they should be enjoined to disinfect their hands under the supervision of a physician.

Nurses and midwives should have the fact impressed on them that it is not only the discharges of puerperal patients that are dangerous, but that their hands may become media of infection after contact with any decomposing animal matters, such as handling beef in the kitchen, dressing cancerous sores, touching menstrual blood, etc.

The question has also been raised as to when accoucheurs, students, and midwives are justified in resuming midwifery practice after handling corpses, pathological specimens, or any decomposing animal matters? Some authorities, Winkel,[2] for example, impose abstinence from midwifery practice from two to four weeks after infecting organisms have been touched; Zweifel,[3] and in Russia Dobronravof (*l. c.*), during eight days; Spiegelberg allows of a shorter time; Schröder two days; Rein does not limit the period. Others, again, like Ahlfeld[1] and Lohlein,[2] do not consider even a single day necessary, but insist upon resorting to strong antiseptic measures after contact with infectious cases, and immediately prior to the examination of the parturient woman. Volkmann, the surgeon, goes so far as to assert that by employing antiseptic measures he has been able, without danger to his patients, to operate almost directly after working in the dissecting-room.[3]

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[1] In the lying-in barrack of Rojdestvensky Hospital of St Petersburg, the rooms assigned to the post-partum women look to the south-east and have no dark blinds to the windows. I have observed no ill effects on the patients, whereas the gain from light was indisputable.

[2] Winkel, *Berichte und Studien*, vol. iii. pp. 439, 440.

[3] Zweifel, "Die Prophylaxis des Puerpural-fiebers," *Berliner Klin. Wochenschrift*, 1883, pp. 4-6. Swiecicki, *Centralblatt für Gynækol.*, 1883, No. 16, p. 242.

At the Berlin Obstetrical Society, the question of abstaining from midwifery practice was decided in the negative; even Schröder gave way to the opinion of the majority, with the proviso, however, that besides disinfecting the hands and changing clothes, he considers the use of a bath necessary before attendance on the lying-in woman.

As a matter of fact, one cannot help agreeing with Lohlein that *septic germs are not killed by time but by strict disinfection.* After contact with contagious cases, a threefold washing of the hands with an antiseptic fluid (viz., immediately after the examination, on returning home, and prior to a new exploration), a change of dress, and avoidance of gloves, are absolutely necessary.

It is also imperative for some time before undertaking a midwifery case to abstain from attendance in the dissecting-room, or on patients with infectious diseases.

The instruments and utensils used in obstetric practice must be disinfected, however clean they may look. Their disinfection is easily carried out by either immersing them in boiling water for a quarter of an hour, and then washing them (if steel instruments), in a 10 per cent. solution of carbolic acid, and if of guttapercha or clay, in a 0·1 per cent. solution of corrosive sublimate. Syringes should be replaced by Esmarch's cups (the best are glass cones) with straight glass nozzles. These are both cheap and clean. Sponges should be banished, and their place supplied by hygroscopic or salicylicized wadding; in the absence of these, by scrupulously clean towels or rags. The waterproof sheet should be new if possible; while in maternities, where frequent change would prove too expensive, it should be well washed each time after use with a 0·2 per cent. solution of corrosive sublimate, or with chlorine water, and then aired for twenty-four hours. Linen laid aside for ordinary (healthy), should not be used for pathological, labour. A disinfecting stove should be arranged in connexion with every maternity, while two wash-houses are always needed—one for the linen of the healthy, the other for that of the diseased lying-in women. The patient's bed should be kept scrupulously clean, and any soiled linen lying under it should be removed. In maternities and among the poor, only straw mattresses should be used, while a change of straw and a freshly-washed linen mattress covering should be provided for every case. The straw may afterwards be employed in the stable.

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[1] Ahlfeld, *Centralblatt f. Gynæk.*, 1880, No. 11, p. 374.

[2] Hermann Lohlein, *Centralblatt für Gynækol.*, 1883, No. 23. Fritsch in the same Journal.

[3] Wiedow ("Zur Frage der Antisepsis] während der Geburt," *Centralb. f. Gynækol.*, 1883, No. 37) justly observes that it is not every one who would allow such a surgeon to operate on him.

The accoucheur's armaments should, if possible, be of metal, and nickelled, not guttapercha coated (Leytor's forceps, for example), as they are then more easily disinfected (unfertilized, as pathologists say) by different antiseptics, before and after use. The best way of disinfecting them is by immersion for quarter of an hour in boiling water, and then washing in a 10 per cent. solution of carbolic acid. Corrosive sublimate is not applicable in these cases, as it coats the metal. When metallic instruments are used, however, in cases of fœtid discharge from the uterus (endometritis during parturition, for example), they should be heated to a very high temperature by the accoucheur himself, or given to a surgical instrument maker for that purpose. All instruments had better be kept exposed in cupboards and not in velvet-lined cases; while for transport nothing can surpass a clean leather bag. Wrapping the instruments, unless nickel-plated, in carbolized muslin, which itself easily undergoes decomposition, attains no object except the production of rust. It is strange that such a procedure should have been recommended by Dr Rein.

(*To be continued.*)

III.—CASE OF CARBOLIC ACID POISONING.

By William Hunter, M.B., etc., lately Resident Physician, Royal Infirmary; President of Royal Medical Society.

Cases of poisoning by carbolic acid are sufficiently rare as to merit that any well-marked case of such should be put on record. The following case, which was under my charge in the Royal Infirmary, is of interest, alike from the severity of the symptoms manifested at the time of admission, and from the speedy recovery of the patient after the removal of the poison from the stomach.

Mrs H., aged 47, was admitted into the Royal Infirmary about seven o'clock on the evening of the 25th August, suffering from the effects of having swallowed a quantity of strong carbolic acid. The history was that an hour previous to admission, while she was under the influence of drink, she had swallowed about a wine-glassful of crude carbolic acid which her son, who was engaged in a chemical manufactory, had kept in the house; that she immediately experienced great burning pain in the mouth and throat, and suffered greatly from thirst, which she attempted in vain to alleviate by drinking cold water; and that in about half an hour she became unconscious, in which state she was removed to the Infirmary.

When admitted the following was found to be her condition:—

She was in a state of profound stupor, and quite unconscious; her face and ears were very livid; pupils mediumly contracted; and her lips were somewhat whitened, but not markedly so. Her breathing was rapid, rather laboured, but not stertorous in character, and the breath had a very strong odour of carbolic acid. Her pulse was about 120, soft and feeble, but regular. She was in a condition apparently bordering on collapse, except that her extremities were warm to the feel.

As she could not be roused, and it was quite impossible to make her swallow anything, recourse was at once had to the stomach-tube, although the danger of inflicting further injury on the already probably corroded mucous membrane of the œsophagus by the passage of the tube was fully present to the mind. The tube was passed without any difficulty, and a quantity of tepid water containing washing-soda was at once poured into the stomach. On depressing the proximal end of the tube, a quantity of darkened, rather oily-looking fluid came away, which had an extremely strong odour of carbolic acid—so much so, as to be appreciable all over the room.

About 10 ounces of olive oil were then poured into the stomach, allowed to remain a few seconds, and then withdrawn as before. This had no appreciable smell of carbolic acid. To make certain that no acid should be left in the stomach, the washing out with washing-soda solution was repeated three or four times, till the fluid which escaped was entirely free from any smell of carbolic acid. Apparently most of the carbolic acid came away in the first washing, as there was no smell of the acid in any of the later washings. With the third washing a number of dark shreddy-looking masses came away, which at first sight looked extremely like pieces of detached mucous membrane, but which subsequent examination showed to be merely pieces of darkened mucus from the stomach. After the last washing three or four ounces of olive oil were left in the stomach, both as a protective to the mucous membrane and as a gentle laxative. After the withdrawal of the tube, her condition seemed unchanged. She was still very livid, quite unconscious, and her breathing rather more stertorous in character.

From 8 P.M. to 10.30 P.M. she grew steadily worse. At this time the lividity was very marked; the pulse was 140 per minute, very small and feeble; and the breathing was now very noisy and stertorous in character, the respirations being as many as 40 per minute. She seemed to be rapidly sinking, and a very grave prognosis was given. About an hour later, however, she began to be restless, moving herself about in the bed; and this evidence of discomfort increased so much, that at half-past twelve she was able to sit up in bed, and to answer questions intelligibly though feebly. Her pulse was now 96 per minute, and much firmer in character. She had no pain over stomach, even on pressure; but she complained of great thirst, and drank eagerly of milk with the white of an egg beaten up in it, which was given to her. Soon after, she became sick and vomited,—the vomited matters consisting of large pieces of undigested meat, all somewhat whitened, and smelling very strongly of carbolic acid. The vomiting was repeated two or three times, and always with a like result. At the same time the bowels moved, the motion being very dark in colour, and with a very strong odour of carbolic acid. She spent a restless night, complaining much of thirst; and during the night she drank a large quantity of milk.

The following morning she was much better. She complained of her lips, which were slightly swelled and puffy; and the back of the throat and tongue were somewhat white and parched looking. She had no pain, or even the slightest sense of uneasiness, over the stomach. The urine passed during the night was very dark and smoky in colour, but no albumen or blood were present. The urine continued slightly smoky in tint for a day later, after which it became of natural colour. The subsequent progress of the case calls for little remark. Her recovery was uninterrupted. She had no uneasiness except that arising from the condition of her lips, which became more swelled and somewhat œdematous; and a slight huskiness of the voice, which had been present before, became more marked for two or three days, probably from some corresponding swelling and œdema spreading down to the larynx from the throat. She left the hospital eight days after admission quite recovered.

The case is interesting in more than one respect. Unfortunately, as in so many other cases of a like nature, the quantity of the poison actually taken cannot be accurately ascertained. From her own account it seems that she had poured out the carbolic acid into some water, and had attempted to gargle her throat, and that she then at once experienced the feeling of heat and burning in her throat and mouth. It is evident from her condition on admission that she must have swallowed the greater part of her gargle. The coma, the lividity, the condition of respiration and circulation, and the strong odour of carbolic acid emitted by the breath, and the quantity of carbolic acid removed in the first washing, all point to the probability, if not certainty, that she had swallowed a poisonous dose of the acid. It is, of course, difficult to give an approximate estimation of the quantity taken. It is probable that the quantity cannot have been much less than an ounce, as the smell of carbolic acid in the first washing was exceedingly strong; and this does not take into account the quantity absorbed by the pieces of meat and that absorbed into the system and excreted afterwards in the urine and fæces. Speculation on this point, however, is useless.

The chief interest of the case centres in the remarkable illustration which it affords of the effect of the condition of alcoholism in arresting, more or less completely, the process of digestion in the stomach. How complete the arrest was in this instance is evidenced by the fact that food which had been taken four or five hours previous to the swallowing of the poison remained unchanged; so much so, that even five or six hours later the various articles of diet of which the meal had been composed could be readily distinguished. The woman doubtless owes her life to the fact that she was in a condition of alcoholism at the time she took her last meal, and that this condition persisted at the time she swallowed the poison. Absorption was diminished, and digestion was at a standstill. The undigested pieces of meat acted as a very efficient pad to the mucous membrane of the stomach, protecting it from contact with the acid; and, as was shown by the strong smell of carbolic acid which they had, themselves absorbing a considerable quantity of it. It was this efficient protection which no doubt explains the entire absence of any pain or uneasiness in the stomach from the very outset.

Not only was the digestive power impaired or prevented altogether, but the power of absorption of the mucous membrane of the stomach was probably also much diminished by the condition of alcoholism. Apart altogether from the padding which the mucous membrane of the stomach had, there was no doubt much less absorption of the acid than would have been the case from a healthy stomach.

A striking illustration of this diminution in the absorptive power of the stomach in such conditions is afforded by the case, related to me by Dr Affleck, in which a man, while very drunk, swallowed no less than 20 grains of morphia. When seen, an hour or two afterwards, he was in a state of complete insensibility, with pin-point pupils, stertorous breathing, and all the other phenomena of opium poisoning. The stomach was emptied by means of the stomach-pump, and a large quantity of morphia removed. The man ultimately recovered. Had he not been drunk at the time he took the poison, and the absorptive power of the stomach in consequence almost at a standstill, a recovery from such a poisonous dose would have been absolutely impossible.

As regards the treatment pursued in this case, the only point worthy of consideration is the use of the stomach-tube. In cases of corrosive poisoning, the use of the stomach-pump is generally contra-indicated. The condition of the mucous membrane of the œsophagus and stomach in such cases is generally such as to lead one to avoid the possible further injury to the mucous membrane which a tube passed into the stomach may inflict.

This danger is probably too much exaggerated, and implies a certain violence in the method of using the tube which is very far from being necessary for the proper accomplishment of the object in view. In no case should such a fear deter from the use of the stomach-tube. In most cases, indeed, it will be found that its use is decidedly preferable to that of emetics, the administration of which always means a certain amount of delay; whereas the tube gives us at once a complete command over the stomach, both for emptying it of its contents and afterwards for washing it thoroughly clean.

In the present case the entire absence of any pain or uneasiness in the stomach is probably owing in great part to the thorough washing which the mucous membrane received, and afterwards to the lubrication with the bland oil which was left in the stomach, and which at the same time acted as a very efficient laxative to the bowels.

IV.—A NOTE ON THE TREATMENT OF BROMIDROSIS OF THE FEET.

By J. S. Stewart, L.R.C.P. and S. Ed., etc.

Few affections of the skin are more disgusting or more difficult to treat successfully, by the ordinary methods, than fœtid sweating of the feet, with or without excessive secretion. The thickened skin over the heel and anterior ends of the metatarsal bones seems to afford a very secure and ineradicable nidus for the as yet undifferentiated enzyme which induces fermentation with its fœtid products there. One form of treatment seems to be invariably successful, and therefore deserves to be much better known, viz., that devised by Hebra, which, he says, never fails, and recommends to be used in all severe cases. Hebra employed the following ointment:—

℞ Olei lini,
Emplastri plumbi liquefacti, equales partes.
M. ft. ung.

This he directed to be spread thickly over a piece of linen large enough to cover the sole and sides of each foot,—both feet, in the first place, to be carefully washed and dried. Pieces of linen rag well covered with the ointment he directed to be placed between the toes, so as effectually to separate them and secure thorough application of the ointment. Over this the sock or stocking could be worn with a light new slipper, and patient allowed to pursue his or her ordinary calling. This dressing to be repeated every twelve hours for ten or twelve days. The foot not to be wetted after treatment has begun, but wiped when necessary with a dry cloth, or washed with dry bran or other mealy substance, should any part become dirty or caked with old ointment, etc.

Whether mild or severe, all cases are curable by it, and no other method seems to yield such a prompt and satisfactory result. To ensure success, the whole of the skin of soles and sides of feet and toes must be tanned by the process and gradually thrown off as brown leathery exfoliations in from two to four weeks. All boots, shoes, slippers, etc., worn by patient should be discarded; because if worn again the patient is reinfected in three or four months, and gradually becomes as bad as at first. Stockings or socks should be very carefully cleansed, and disinfected by heat or by steeping in a hot solution of perchloride of mercury (1 in 1000 of water) for several hours before being washed. Neumann directs that Hebra's ointment and dressing should be changed once in three days for nine days, that is, three times altogether, a method not to be relied on in many cases seen in this country.

What I have found to yield the most satisfactory result, in treating a tolerably long series of cases, is to have the feet thoroughly washed in hot water, then steeped for a few minutes in a solution of permanganate of potash of the strength of from 4 to 6 grains in the ounce of water. The feet are then dried, not to be again wetted until complete exfoliation of the tanned cuticle has taken place.

Hebra's lead plaster ointment is then thickly spread on strips of cloth about 1½ inch broad, and the foot covered from the toes back over heel as high as the malleoli with these, arranged and applied like a scultetus bandage. Each toe should first be wrapped round with a strip of clean rag half an inch broad and thickly spread with the ointment. This dressing should be renewed every twelve hours with fresh rag and ointment, for a period varying from ten to sixteen days, according to the severity of the case and the thickness of the heel skin. In most cases the odour will be very much diminished by the end of the third day, and will not be perceptible by the ninth. The shedding of the skin takes place *pari passu* with the growth of the new cuticle, and may not be completed until the end of the third or even of the fourth week.

V.—ON THE NATURE OF THE CAUL OF THE NEWBORN CHILD AND THE METHOD OF ITS PRODUCTION.

By T. Arthur Helme, Student of Medicine at the University of Edinburgh.

The nature of the caul and the manner of its production are, so far as I have read, nowhere accurately described, at least in the English obstetric literature. Some writers make no mention of it whatsoever, while others give a meagre, and, it seems to me, inaccurate report, *e.g.* —"It not unfrequently happens, if the membranes are somewhat tougher than usual, and the pains frequent and strong, that the fœtus is pushed through the pelvis, and even expelled, surrounded by the membranes. When this occurs the child is said to be born with a caul."[1] "In rare cases the rupture of the membranes, if left to nature, does not occur, and the ovum may descend in its integrity to the vulva. In such instances the membranes sometimes rupture in the neighbourhood of the child's neck, and the head is born covered with the so-called 'caul,' *i.e.*, the detached portion of the membranes."[2] "Sometimes the membranes are very hard, thick, and resistent, the rupture only taking place at an advanced stage of labour—when the head clears the vulva, for instance; or it may occur in a circular manner, and the head escape covered by a kind of hood. The child is then said to be born with a 'caul.'"[3]

CASE I.—In January 1883 I attended Mrs E. in her confinement. Presentation vertex; position L.O.A. The first stage lasted more than twelve hours, when the "membranes" (as is usually described), ruptured, and some liquor amnii came away. The child's head when born was seen to be completely enveloped in a caul, which passed down anteriorly to a point one inch above the umbilical cord, posteriorly nearly to the angle of the scapula: it was closely gummed to the scalp by the vernix caseosa. The following is an extract from the notes of the case I made at the time:—

"As the caul was of such large size I was prompted to examine the decidual membranes with care, in order to ascertain from what part it was torn. The membranes, however, were apparently complete, attached to the whole circumference of the placental mass, and having a rent, through which the child had escaped, at one side, two inches from their attachment to the margin of the placenta. The edges of the rent were regular and even, whereas the edges of the caul were ragged and uneven. The caul apparently had not been formed by the tearing off of a portion of the decidual membranes. On tracing the cord to the placenta there was found a thin membrane having a circular attachment round the insertion of the cord, and giving a tubular investment to the cord, single, and with a ragged edge, six or seven inches in length, and growing in width as it retired from the cord. This membrane was *tougher* than the decidual membranes. This seemed to be the true source of the caul, and the impression formed was that there had been a distinct bag within the decidual bag of membranes."

On microscopic examination the caul and the membrane attached to the cord were found to have the same structure, *i.e.*, a single layer of pavement epithelium, on one side of which was a small amount of connective tissue, composed of small spindle and stellate cells embedded in a granular matrix. The outer bag of membranes was lined by a smooth shiny surface, but it could not be separated up into its three usual components, viz., amnion, chorion, and decidua.

I was for a time at a loss to account for the inner membrane;

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[1] Playfair, vol. i. p. 305 (fourth edition).

[2] Lusk (1882 ed.)

[3] Cazeaux (American sixth ed.)

afterwards, however, its histological characters suggested to me that this might be the amnion completely detached from the chorion and placenta. This idea was supported by other cases.

Case II.—Mrs C., iv.-para, L.O.A.; first stage lasted ten hours, during which time the so-called "membranes" came down very low in the vagina, but did not reach the vulvar aperture. When removed, the membranes presented the appearance of two sacs, one within the other: the inner attached round the insertion of the cord, the outer, which was attached to the placental margin, could be split into two well-defined layers, decidua and chorion, so that the inner sac was composed of amnion, which had either remained unattached to the chorion throughout its development, or had been imperfectly attached so as to become separated before or during labour. The smoothness of its surface suggested that there had never been any union. Microscopic examination showed it to have the amniotic structure.

This case was interesting, in that two of the woman's previous children had been born with cauls.

Case III.—Here the child was born with a caul, and the same appearances presented themselves as in Case I., namely, the inner sac from which evidently the caul was torn consisted of amnion only. Microscopic examination also gave similar results, *i.e.*, both inner sac and caul presented the amniotic structure.

Case IV.—Mrs R., vii.-para, R.O.P.; first stage lasted about twelve hours. At the eleventh hour the os cervicis was fully dilated, and a gush of forewaters came away, so that the nurse called to me that the membranes had ruptured; the bed certainly was wet, but on examining, per vaginam, I found that during a pain a smooth tense bag protruded from the os. The smoothness of the bag and the escape of the water suggested to me that here was a case in which the amnion was separate from the other membranes, and between them liquid had collected: the outer membranes had ruptured, but the amnion remained unbroken. I therefore did not interfere, but waited; this bag gradually descended, until an hour afterwards it protruded from the vulvar aperture: it had a quite smooth surface, and its appearance reminded me of the pleura somewhat. It now ruptured, and a large quantity of liquor amnii came away. On examining the placenta, with its membranes, after delivery, I found the amnion to be completely separated from the rest of the membranes.

Microscopic examination showed it to have the amniotic structure.

Case V.—Here the caul was of large size, but the amnion was not completely detached: it remained loosely adherent to the placenta over a segment corresponding to about one-sixth of its circumference. On microscopic examination the caul and this detached membrane both showed the amniotic structure.

CASE VI.—When removed from the child's head and shoulders the caul was found to have the shape of a conical bag. This bag consisted of amnion, the greater portion of which had been torn away. Attached to, and covering the truncated apex of this amniotic cone was a much smaller cone, made up of chorion and decidua. On examining the placenta and membranes the remaining part of the amnion was found completely detached from the chorion and placental surface. Here, evidently, instead of the usual linear rupture of the presenting bag taking place, the decidua and chorion had first given way in a circular manner in the lower part of the uterus, and afterwards the amnion had been separately fractured at a much higher level. The explanation probably lies in the fact that the amnion was separated from the chorion at all points except over a small circular area at its lower part. Consequently, when the caul was born, this circular area of chorion and decidua was found still adherent to it.

These cases, then, are sufficient to show that the caul is not "the detached portion of the membranes" (Lusk); it possesses only one epithelial layer, showing that not only does the maternal decidua take no part in its formation, but not even the fœtal chorion. It *consists only of amnion*, a portion of *this structure alone* being torn away so as to cap the child's head. The method of its production is not so evident, and here we pass partly from fact to hypothesis.

Churchill says,—"The amnion is thin and transparent, but of a firm texture, *resisting laceration much more* than the other membranes" (P. 94, sixth ed.)

Ramsbotham says,—"Of the two membranes (*i.e.*, chorion and amnion) the amnion is *by far the stronger*."

This is exemplified markedly in Case IV., where the amnion was *seen* to protrude from the vaginal orifice intact, and uncovered by any other membrane, showing that it was of a firmer and more elastic nature; and in this we have one element in the production of the caul. This point, moreover, is definitely proved by the experiments of Matthews Duncan,[1] in which the average tensile strain of the different membranes was found to be as follows:—

Of the decidua 0·35 lb. per linear inch.
„ chorion 0·62 lb. „
„ amnion 1·19 lb. „

In the production of the caul, then, there are several elements at work:—The first is, that the amnion has never united with the chorion, or that the union has been incomplete or imperfect, allowing separation. The second element is the greater firmness and elasticity of the amnion compared with the other membranes. The third element is the relation of the fœtal head to the walls of the parturient canal.

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[1] *Researches in Obstetrics*, pp. 301 and 314.

In an ordinary case without a caul the following happens:—Protruding from the cervix is the bag of membranes composed of three structures, viz., decidua, chorion, and amnion, all pretty firmly united; between this bag and the head is liquor amnii; during a pain the bag is distended; this distension gradually increases until the *membranes* rupture. The *inelastic degenerated* decidua is the first to give way, but as the chorion is fixed to it and the amnion to the chorion, the split decidua carries these with it, and the tear involves all three.

Now, when the amnion is separated from the other two, different events may happen. *Its elasticity and greater strength* are sufficient to withstand the distension; the united chorion and decidua give way, but the amnion remains intact; if there is fluid *between* the amnion and chorion this would now escape and give rise to the supposition that the forewaters had come away, as happened in Case IV.

The further course depends on the third factor. If the relation of the fœtal head to the walls of the parturient canal is such as to allow at the beginning of each pain a certain amount of liquor amnii to pass before the head, then the amniotic bag may advance further and further down the vaginal canal (as in Case II.), or may even come to protrude at the vulvar aperture as in Case IV., where rupture may occur.

But if the head is in such close contact with the walls of the canal as to act as a tampon, no more liquor amnii passes into the presenting bag, but, instead, the head is driven into closer contact with it, and is covered as with a cap. The fact of its being closely applied to the head supports the thin membrane and protects it from tearing at this part, so that head and amniotic covering are gradually driven further down the canal. Tension is thereby made on the membrane at a higher level, where it is separated from the body by the liquor amnii, and here, the *amnion* being unsupported, rupture occurs.

In three of the cases mentioned above this was so: the passages were not well dilated by a fluid wedge, but by the head itself, so accounting for the somewhat long first stage. But this can only be proved by observation of a much larger number of cases than I at present have opportunity for. The subject of these various ways in which the membranes rupture, and out of the many of which I have described only a few, is an interesting one, and may be worthy of this notice.

VI.—MEDICAL ESSAYS AND REVIEWS.

By John Boyd, M.D., Slamannan.

Among the numerous specimens of polyglot medical literature I have been privileged to peruse, there came No. 14 of the *Revue*

Médicale et Scientifique d'Hydrologie et de Climatologie Pyrénéennes, dirégeé par MM. les Docteurs F. Garrigou (de Luchon), E. Duhourcau (de Cauterets). At p. 438 there appeared from the pen of the latter gentleman a review of a review of a paper by Hebra in the *Jahrbuch für balneologie, hidrologie*, etc., by Dr E. Moreno of Madrid in the *Anales de la Sociedad Español de Hydrologia Medical*.

After having largely traced the physiological action and the changes effected on the organization, Dr Moreno, considering the objections raised by physicians against the use of baths, endeavours more especially to refute those of Hebra referred to.

"The great scientific authority of the dermatologist of Vienna, the importance of his observations, have caused the author to refute the accusations raised by Hebra against baths, douches, and other hydropathic remedies—the more so that he thereby meets the objections previously made by others, and brings to view the excellent hygienic properties of these measures. In the opinion of Hebra, the employment of the various hydrotherapeutic apparatus cannot be esteemed a hygienic procedure, inasmuch as there are thousands of individuals who wash their hands and faces only once a week (!), and who, nevertheless, attain to a very advanced age! Moreover, there are no statistics to prove that marine, riverine, or ordinary baths, douches, etc., augment the strength or resisting power of the constitution, or protect it from a great number of diseases, particularly catarrhs, rheumatism, and affections in general originating in cold. To establish his statements, Hebra compares the figures of mortality between those country people who very seldom use baths or ablutions, and the denizens of large towns who employ them much more copiously. After a prolonged use of douches, baths, lotions, etc., and of manipulations executed on the skin, this may become the seat of various eruptions, such as erythema, erysipelas, urticaria, arising from the cutaneous irritation, etc., provoked by the water and the frictions consequent on its application. These cutaneous affections are always in direct ratio to the excitement exercised on the skin. They are also less frequent and less intense after ordinary or river baths than after douches, vapour baths, etc. In proof thereof Hebra cites the frequency with which dermatoses appear among washerwomen, employés of hydropathic establishments, or among those persons whose occupation forces them to moisten their hands or other parts of the body. These maladies originate in the skin irritation excited by water, and that whether cold or hot. It is a grave error, says Hebra, to suppose that by the use of water people can preserve themselves from diseases, because the increased irritability of the skin diminishes its resisting power and facilitates the absorption of morbific agencies by that route.

"According to him the prophylactic action of water against the maladies produced by cold can no longer be admitted, the effects

of baths and lotions being more fugitive each time. Besides, according to his statistic data, the employment of baths in typhus, scarlatina, etc., is simply illusory—an expectant treatment giving the same results. It being impossible to follow the Viennese Professor step by step, and to quote all his observations, Dr Moreno merely transcribes his conclusions, which are—

"1. The action of water is not indifferent for the skin; it may cause various eruptions by the irritation it produces.

"2. The temperature of water plays an essential part in the hydrotherapeutic treatment only by virtue of the power it has to macerate and irritate the cutaneous integument.

"3. When baths, lotions, etc., are prescribed, it is necessary to adapt their temperature to the susceptibility of the subjects.

"4. General lotions, hot and cold baths, do not constitute any prophylactic remedy against the various maladies of internal organs; on the contrary, they may give rise to serious skin affections.

"5. When these remedies are applied to the treatment of skin diseases, they ought to be long employed—never less than an hour. The warm bath may be prolonged uninterruptedly for several months.

"These objections of Dr Hebra are of such importance that if true they would completely destroy the hygienic reputation of baths, and greatly restrict their therapeutic applications. From these reasons, it is necessary to examine how far they agree with the results of daily experience." Being greatly amazed and interested by the reading of the re-report of Hebra's doctrines, and having in my translation of the proceedings of the Medical Congress of Seville in April 1882,[1] had occasion to mention Dr Duhourcau's communication, "Del Valor de las Aguas de Cauterets en el Tratamiento de la Tisis Pulmonar," read on the 14th April, which lucid and eloquent address now lies before me, and which I was prevented from being present at its delivery by the unlucky outbreak of measles that spring, I thought I might presume to write asking him to send me on the following number of the periodical containing the sequel of the article. Although better versed in conversational than written Française, I composed my petition, and in about a week I received the requested document, accompanied by a letter, the cordial, friendly tone of which made it a pleasure to receive. The remainder of the article was as follows:—"This consideration that the inhabitants of the country attain a more advanced age than the dwellers in large towns is an argument advanced whenever a discussion arises, not only ôn baths, but also on the other hygienic measures adopted in the great centres, which, from easily comprehensible reasons, are not adopted in the minor agglomerations. But it is sufficient to advert to the sort of lives led in these—the nature of their work—the quiescence, almost the atrophy of their minds, to understand that the difference in the average longevity between the two originate in another set of causes with which baths, lavage, douches, and other hydrotherapeutic agencies have certainly no sort of relation. Besides, there exists no statistical work proving that individuals using these agencies suffer more or live shorter than those for whom bodily propriety is a dead letter. Dr Hebra advances gratuitously, therefore, his allegations on this point. One cannot but be surprised at the frequency, according to Hebra, that at the conclusion of a series of douches, baths, etc., erythemas, furuncles, eczemas, and other cutaneous affections have appeared. In more than 5000 cases he has had occasion to observe, as also in the practice of his brethren, Dr Moreno has seen dermatoses appear consequent on the irritation of the skin very exceptionally: he can easily understand that douches at high pressure, vapour baths long-continued and accompanied by rough frictions, might cause lively irritations on the skin; but surely no physician would ever advise such proceedings as hygienic or prophylactic measures: he would reserve such treatment for cases where he had to meet an obvious therapeutical indication. The diminished resistance of the skin, and the consequent augmented facility of absorption of morbific miasms which Dr Hebra avers is found in those who devote themselves to balneo-therapeutic treatment, is an unfounded statement. So far from the skin being the only entrance by which morbid germs can enter into the system, the conditions adverse to absorption it presents causes the mucous membranes of the respiratory and digestive organs to be the easiest inlet to these.

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[1] *Edinburgh Medical Journal*, vol. xxviii. p. 307.

"As to the preventive efficacy of water applied in various forms to the skin against catarrhs, rheumatisms, and other maladies caused by cold, it is a long ascertained fact, and a method recommended by Graves and other important authorities.

"As much can be said as to the medicinal virtue of water in the treatment of typhus, scarlatina, and other exanthemata. The observations of Berthels-Jürgensen at Kiel, those of Liebermeister at Basel and Hagenbach, those of Ziemssen at Erlangen, those of Wünderlich, Rollet, and many others, evidently prove that the aqueous treatment has considerably diminished the sum of mortality in these diseases.

"Baths augment the cutaneous exhalations and the peculiar secretions of the skin, thereby favouring the expulsion of the excrementitious materials that arise from the organic combustions, and prevent a great number of maladies, such as rheumatism, gout, herpetism, and various others, which are due to the retention of these products. To this work is also to be added the powerful influence of baths on the pulmonary exhalations and the urinary secretions.

"By their excitant action on the phenomena of nutrition, baths highly contribute to the regeneration of the organization, to the maintenance of the equilibrium between the ingesta and egesta of materials necessary for the fulfilment of the vital functions in a normal and physiological manner.

"In the child these properties of the bath are even more important than in the adult. The greater energy of the cutaneous functions in the former, it is well known, compensates for the minor action of respiration in the first period of life. . . .

"The calmative effect of baths on the infantile nervous system is another influential agency in behalf of children, among whom maladies of hyper-irritation are so frequent, especially during dentition. How many attacks of eclampsia, of meningitis, of cerebritis, might be avoided if it were known how to employ hydrotherapiæ rationally and methodically when the infant is passing through this most dangerous period of its existence!"

A considerable portion of the journal referred to is devoted to reviews of medical books and periodicals. What seems droll in a work on *hydrology* is a racy notice of a book by Dr Don Francisco Revueltas y Carillo—a vindication of the vino de Jerez (sherry).

"Those of our confrères who have had the good fortune to be present at the Medical Congress of Seville, and to take part in the excursion to Jerez de la Frontera, will never forget the interesting visit made to the *bodegas* (vaults) of the firm Gonzalez, Byass, & Co., and of the Count of Bayona, nor the honours there bestowed on them, nor the princely feasts there offered them. The author of these lines was one of the fortunate number then present, and after ocular demonstration, he is able to avouch the truth of the scientific memoir, rapidly sketched and worthy of perusal, and of the photographic view of this immense establishment. This memoir was followed by the discourses pronounced by Dr D. Fed. Rubio, Señores San Martin and Izquierdo—the whole completed by the approbation of the Medical Congress."

There can be no question that none of our Spanish or French brethren *exceeded* on this joyful occasion. Probably an increasing number of them, as with ourselves, theoretically sympathetic with reasonable conviviality and generous wine, find it practically expedient, in the interests of our nervous and digestive systems, so to live as to merit the full approval of Dr Norman Kerr.

It appears that reports have been set afloat by interested parties that cholera had broken out in the Pyrenean health resorts—stories totally unfounded. The following declaration was initiated by Dr F. Garrigou, one of the editors, and signed by all the medical faculty of thirteen thermal centres of population in that region, beginning with Luchon and ending with Andurac:—

"In the presence of malicious rumours which individuals, undoubtedly interested, have taken upon them to spread abroad about the thermal stations of the Pyrenees, the medical practitioners of these stations have felt it their duty, in the public interest, to unanimously protest and declare that the sanitary condition of the thermal Pyrenean towns is as perfect as possible." Here follow the signatures, which are all purely French, except two in Luchon (Drs Agemar and Valdes), Mora of Dax, and Iuanchuto of Cambo. Spanish names in the profession, notwithstanding the proximity of the frontier, seem to be as rare as Dr O'Brien or Surgeon Haggarty among ourselves.

Not only did I receive the periodical requested, but a large selection of the pamphlets on Cauterets and its bathing establishment, of which Dr Duhourcau is the author. The thesis of his doctorate was, *Étude sur les Eaux de Cauterets*, Paris, 1873, followed by twelve other publications on the same theme. The most important is that of 1882, 109 pages, *Cauterets ses Eaux Minerales et leurs effets Curatifs*. He describes the town as thermally known from the time of Charlemagne, its name derived from the Bearnais words *caüt é réts*—hot and cold—as elevated from 932 to 992 metres above the level of the sea, 42° 35′ N. lat., and 2° 28′ W. long., in a charming valley of the Hautes-Pyrénées, having 1800 native population, but able to accommodate more than 6000 strangers. Running from north to south at right angles to the chain of mountains, the valley is 6 kilometres in length with average breadth of 700 metres. From the west winds it is sheltered by the high mountains that encircle it, while those of the south and north strike against the sinuosites of the gorges they have to traverse. During the season the medium temperature is 12°·5 C. at 6 A.M., 19° at 2 P.M.; the maximum is 30°, the minimum 4° to 5°. Barometer average, 688 mm.; average hygrometer, 82° of Saussure. From these conditions Cauterets, although situated at a great altitude, possesses a mild climate, drier and less changeable than any other Pyreneal station, and is strictly admissible into the first rank of climates, as defined by Professor Jaccoud in his recent *Leçons Cliniques*, which have a regenerative action on the constitution. From the great system of water-course pipes, leading the Gave water from Latun, there is an abundant supply of potable water of excellent quality, so that visitors are no longer liable to intestinal derangements on this account.

The mortality at this station is very low among the 22,000 or 24,000 strangers who annually sojourn there; and notwithstanding the serious maladies many of them bring with them, the deaths seldom exceed twelve to fifteen each season. The months of July and August are those in which the place is most frequented, but June and September are equally favourable for the use of the waters. Notwithstanding this numerous *clientèle*, the supply of the thermal waters of Cauterets is much more abundant than actually is required, being above 1,500,000 litres in the twenty-four hours. This enormous quantity of sulphurous water, issuing from twenty-four different sources, supplies nine establishments, and three fountains besides. These various springs flow on the sides of three distinct mountains, being thus divisible into three groups,—those on the east, comprising César, les Espagnols, Pauze-Vieux, le Rocher et Rieumuset; on the south, le Bois, les Œufs, Mauhourat, les Yeux, le Pré, le Petit St Sauveur; and the intermediate or central group, formed by the three springs of la Raillère. The first class arise from schist rocks, the others from granite. These waters are clear, soft, and oily to the touch, sulphurous in smell, and bubbles of nitrogenous gas, with some slight traces of sulphuretted hydrogen, proceed from them. Their temperature varies from 34° to 56° C. All of them give out electricity, and act variously on the galvometric needle. From his own investigations, Dr Duhourcau has come to the conclusion that the sulphuration of the Cauterets waters originate in "*unmonosulfure Alcalin.*"

Elementary Analysis of Cauterets Waters, by M. O. Reveil and Filhol and Dr Garrgou, in a litre.

Chemical Elements.	César.	La Raillère.	Mauhourat	Pt. St Sauveur.	Le Rocher.
	Grains.	Grains.	Grains.	Grains.	Grains.
Sulphur, . . .	0·0099	0·0072	0·0057	0·0031	0·0070
Chlorine, . .	0·0436	0·0365	0·0484	0·0225	0·0284
Iodine, . . .	traces	traces	traces	0·	0·
Acid Sulphuric,	0·0050	0·0260	0·0059	0·0098	0·0302
Acid Silicic, .	0·0581	0·0655	0·0571	0·0562	0·0598
Soda, ...	0·0882	0·0693	0·0826	0·0629	0·0780
Chalk, . . .	0·0152	0·0124	0·0159	0·0061	0·0075
Magnesia, . .	0·0020	0·002	0·003	traces	0·0001
Oxide of Iron, .	traces	traces	0·0002	traces	traces
Organic Matter,	0·0450	0·0350	0·0460	traces	0·0270
Total, ...	0·2672	0·2521	0·2621	0·1630	0·2420
Nitrogen, . .	22 c.c. 33	22 c.c. 50	22 c.c. 90		
Oxygen, . . .	traces	traces	traces		

The following table indicates the temperatures, the sulphuration, and the alkalinity of each spring at Cauterets, per litre:—

Springs.	Temperature.	Sulph. Soda.	NAO. CO2 +10 HO
	Cent.	Grains.	Grains.
César, ...	48°	0·0228	0·0962
Les Espagnols, . .	46°·7	0·0215	0·0992
Pauze-Vieux, . . .	41°·8	0·0172	0·1099
Le Rocher, ...	42°	0·0169	0·1108
La Raillère, . . .	39°·4	0·0157	0·1039
Pt. St Sauveur, . .	34°·5	0·0135	0·0951
Mauhourat, . . .	49°·5	0·0105	0·1095
Les Œufs, ...	53°·3	0·0113	0·1036
Le Bois, ...	42°·3	0·0096	0·1102

A glowing description is now given of the various establishments for carrying out the water cure at this station, which, in connexion with the pure mountain air, the casinos, theatres, concerts, *bull-fights*, etc., the enchanting landscapes and excursion places, etc., leave nothing to be desired for the comfort and recreation of the visitors.

The action of these waters is primarily stimulating. At first they excite the appetite and digestion, then gradually, when taken internally, a sort of thermal fever comes on, sometimes determinating cutaneous eruptions on the skin. The urinary secretion is augmented, as also the pulse and the bodily warmth. Respiration becomes fuller and more active, and a general tone of well-being and comfort ensues. Their action on the nervous system is the production of a general irritability, as if they occasioned a sort of inebriety. The sulphur they contain acts as a direct poison on intestinal ascarides and lombrices, but not on tape-worms. Scabies disappears under their external application, as also impetiginous eruptions, gastric sarcoma, and the genital aphthous eruptions of diabetes. The spring at Mauhourat enjoys a special renown for dyspepsias and gastralgias, and the maladies of the gastric urinary canals. The Petit St Sauveur, la Raillère, and le Rocher are employed, with excellent effects, internally and externally, in subacute metritis, hysteralgia, and leucorrhœa; while all of them, aided by the pure mountain air and out-of-doors life, tell well on chlorosis and anæmia.

In chronic rheumatism, sciatica, and neùralgias, Cauterets is esteemed quite equal to Aix-les-Bains (Savoy), the waters of which are similar in composition. Two cases of sclerosis of the antero-lateral cords of the spinal marrow are cited as having obtained a marked improvement by a sojourn at this station and steady usage of the means it affords.

In the Spanish address of Dr Duhourcau above referred to, the utility of Cauterets in cases of phthisis is especially dwelt on, and combined with its elevated site and genial climate, it may well compare with Davos-Platz. He summarizes his discourse with the following "conclusiones"—

1st. The waters of Cauterets are included in the same category for the treatment of consumption with the Eaux-Bonnes and sulphurous springs in general.

2nd. They agree principally as to subjects of a lymphatic or strumous nature, arthritic and herpetic, conditionally that they are febrile, not irritable, little liable to congestion and hæmoptysis, free from cardiac lesions, and not arrived at the third stage of phthisis.

3rd. Section speaks of its old reputation.

4th. From the variety and graduated mineralization of the waters of Cauterets, combining the gases, the organic matter, and the salts dissolved, they respond to the most numerous and varied indications which none of the other surrounding stations can fulfil.

5th. Exercising on the lungs the same action, but less vivid and more manageable, as those of Eaux-Bonnes, they are more *stomachic*, and secure more positively the gastric *restoration* which is so necessary for the consumptive.

6th. Some of the springs at Cauterets possess a hæmostatic action in the less violent cases of hæmoptysis, and permit the treatment to be continued in spite of this accident. These are specially adapted for the anti-tubercular regimen.

7th. From its climate, its elevation, the number and completeness of its establishments, and from several special apparatus it possesses, Cauterets enjoys a conjunction of resources for the phthisical, which places it in a superior position to that of any other Pyrenean station. For those ill-starred mortals who have to expiate an hour of Aphrodite by a month devoted to the *cultus* of Mercury, Cauterets claims a most beneficent influence. In a special monograph Dr Duhourcau adduces an ample series of observed cases wherein the treatment then instituted led to satisfactory and permanent cures of secondary and tertiary syphilitic symptoms when combined with, or subsequent on the administration of the specifics, mercury and iodide of potassium, as also against the marasmus due to the inappropriate or exaggerated application of mercury alone. It appears that in the mountains in that quarter threads of *blende* and of *galène argentifers* are to be found, as also occasionally *hydrargyrum* fluidum intermittently. The latter metal has been detected in the spring of Petit St Sauveur, which enjoys a special celebrity in the inherited syphilis of children. But the most attractive of the series is a pamphlet published in 1884 by our author, entitled *L'air des Montagnes et L'air de la mer de leur pureté en Microbes et de leur teneur en produits gazeux divers.* It commences thus:—"Bacteria and microbes have so spread over the field of science, that to the physician and climatologist it has become essential to know in what proportions these infinitely small entities are diffused in the air we breathe—the atmosphere which, whether as agent of contagion or of cure, becomes daily more visibly influential." He goes on to quote the statement of Dr P. Miquel as to the history of recent researches, from those of M. Pasteur in 1860, on Jura and Montanvert, of M. Joly and Musset, and those of Mr Tyndall of 1870 and following years, which were made in the laboratory of the Royal Institution of London, and effectually disposed of the views of Bastian, Vacher, and Raidwood. He then proceeds to detail the investigations of MM. Freindenreuch and P. Miquel on the air of the Bernese Alps.

"In these experiments 2700 litres of air were taken at altitudes varying from 2000 to 4000 metres above the level of the sea; they did not supply a single bacteria nor germ capable of developing on neutralized beef soup. In other trials made in the middle and on the margins of the Lake of Thonne, 560 metres above sea level, 2400 litres of air enclosed and filtered each time furnished, on cultivation, bacteria or micrococci, and bacilli. In a chamber of the Hotel Bellevue in that locality, six bacilli were found in 100 litres of air. It was calculated that in 10 cubic metres of air there was found:—

1. At an elevation of 2000 to 4000 metres, .	0
2. On the Lake of Thonne (560 metres), . .	8
3. In vicinity of Hotel Bellevue (do.), . .	21
4. In chamber of said hotel, ...	600

At nearly the same period M. Miquel found:—

5. In the park of Montsouris, ...	7,600
6. Rue de Rivoli (Paris), ...	55,000

The latter observer considers that the diminished number of microbes in mountain air depends on—1. The diminishing barometrical pressure in proportion to height; 2. The lessened pressure of the air becoming less and less capable of maintaining in suspension all kinds of corpuscules; 3. To the progressive disappearance of *foyers* of bacteria, which becomes complete at the limits of perpetual snow. These researches explain up to a certain point the rarity of epidemic and contagious maladies, and also of phthisis, in the elevated valleys of Europe and the high plateaux of America.

Similar investigations have been carried out as to the purity of sea air, originating in the studies of Commandant Moreau and Dr Plantymausion on the voyage of the "Gironde" from Bordeaux to Brazil and return therefrom. By means of ingenious arrangements these gentlemen were enabled to collect the organisms contained in the marine air, as well on the coast as in the middle of the Atlantic, at a height of 10 metres above the sea-level. The cryptogamic spores of mould lichens, algæ, etc., were enclosed on eight different experiments with variable results, differing from 130 spores in a cubic metre of air up to 1180, and in one even to 3100. The average of the atmospheric dust collected at sea was 530 spores per cubic metre, while at Paris this amounted to 14,000, thirty times more contaminated.

These inquiries demonstrated that from 100 to 200 kilomètres distant from the continent, the air directed by the land breeze is already deprived of the greater part of the micro-organisms arising from the soil; the atmosphere is rapidly purified by contact with the sea,—being washed, so to speak, by whirling over the waves in constant motion. It is therefore the function of the sea to absorb the atmospheric germs, which it never returns. Three experiments taken on the American coast and far out at sea gave 5, 5, and 4 bacteria in 10 cubic metres, while one on the coast of Africa, during the land breeze, gave 60, and one off the Canaries 9. This purity of the full ocean air does not extend to the confined cabins on ship-board, which were found remarkably rich in microbes.

It would be pleasing to follow the author in his fifth division, which treats of the chemical constituents, besides oxygen and hydrogen, observed in Paris and Vincennes, compared with those noticed in the laboratory installed by General Nansouty on the summit of the Pic du Midi, particularly as to the proportions of carbonic acid, ammonia, and nitric compounds mixed with the air, and investigated by MM. Muntz and Aubin, and compared with observations made in Mexico, Chili, Patagonia, Hayti, and Florida; but we must now close with acknowledging the gratitude due to the talented and erudite lucubrations of Dr Duhourcau, whose writings I venture to bring before the Scottish medical public as a specimen of the intellectual vigour and eager activity of our French brethren in their incessant labours to extend the domain of medical science. We cannot take up a copy of the *Gazette des Hôpitaux*, *Le Progrès Médical*, *Journal de Médecine de Bordeaux*, or *Revue Médicale*, without being struck with the wealth of research and exuberance of facts advanced, the pointed reasoning on these, and the instructive points as to therapeutics, the neat, incisive, clinical histories and relations of operations, etc.

The stupendous, indefatigably cultivated medical literature of Germany and Austria, influencing powerfully that of the kindred offshoots of the Teutonic race in Holland and Scandinavia, is too colossal a subject to be mentioned parenthetically or in a sentence. But in the generous rivalry of medical science the Latin nations worthily hold their own. In Italy the Professors of the numerous universities are variously and incessantly poring into the arcana of physiology, pathology, and biology in a manner that, handicapped as we are by hysterical legislation, may ultimately leave us behind. The rescripts and monographs by the numberless city physicians and surgeons in *la bella penisola* are

"Thick as autumnal leaves in Vallambrosa,"

while from the pens of those in my own position—the country parish doctors, *medici condotti*—I have read contributions to professional literature which for originality, vivid description, logical reasoning, and classic elegance of expression, the best of us might have been proud to have written.

In Spain, moreover, the quantity and quality of recent contributions to the numerous serial and sporadic medical publications give us every reason to expect a re-appearance of that galaxy of intellectual magnates that illumined Iberia fully three centuries ago,—prominent among whom was the Arragones Miguel Servet de Villa Nueva, who partially anticipated Harvey by a hundred years in his discovery of the minor or pulmonic circulation, and who was burned with all his books about him in the market-place of Geneva, 21st October 1558, because he was not very sound in the faith—a dire offence, which in our milder days a celebrated Professor of Hebrew was held to have sufficiently expiated by removal from his chair.

Part Second.

REVIEWS.

A Treatise on the Theory and Practice of Medicine. By JOHN SYER BRISTOWE, M.D. Lond., LL.D. Edin., F.R.S., etc., etc. Fifth Edition. London: Smith, Elder, & Co.: 1884.

SUCCESS is not always a safe criterion of merit. The success of this work is, however, but a measure of its merit, and the attainment of a fifth edition within eight years is a degree of success which is not given to many medical writers to experience.

In the present edition, the introductory chapter on diseases of the heart has been largely re-written, while subjects which, in the preceding edition, appeared in the appendix, are now relegated to their proper places, while the appendix or addendum contains a short notice of the cholera bacillus. The causation, symptoms, and morbid anatomy of the various diseases are discussed and recounted with calmness, fairness, ability, and accuracy, and the literary style is marked by unflagging care, and is often elegant.

The section devoted to the nervous system embraces the essentials of our more recent knowledge, and ought to be of inestimable value to the practitioner who seeks a knowledge of the more modern advances in this important and interesting department.

The book has one defect, and that is the brevity and want of definiteness in treatment. We know that opinion is divided as to whether this is to be regarded as a defect, but we are distinctly of opinion that it is. A book deficient in this respect is not of the same value to the young practitioner as it would otherwise be, and even to the student it tends to convey the impression that treatment is a secondary consideration, and that the means to be used do not require careful thought or judicious selection. We quite recognise the unsatisfactory position of scientific therapeutics, but we possess vast stores of valuable empirical therapeutics, which it is most desirable should not be thought too lightly of, and which are drawn upon by the more intelligent practitioners throughout the land, and applied with a shrewdness and success which is not always recognised by our leaders. Dr Bristowe, from his extensive and varied acquaintance with the clinical aspects of disease, must be well fitted to lay down more precise rules than he has hitherto done, and by doing so we are sure he would enhance the value of his work, and still further aid those who require guidance and assistance. Notwithstanding this defect, there is no book we would more heartily recommend to the student and the practitioner.

Clinical Lectures on the Practice of Medicine. By the late ROBERT J. GRAVES, M.D., F.R.S., Professor of the Institutes of Medicine in the School of Physic in Ireland. Vol. I. London: The New Sydenham Society: 1884.

FOLLOWING soon after the appearance of *Stokes' Diseases of the Chest*, as a reprint by the New Sydenham Society, comes the republication by the same Society of the classical lectures of his master Graves. We think that the Society has done well in issuing this great work, which will always remain a monument to one who was, as Trousseau truly wrote, "a perfect clinical teacher." The influence of Cheyne, Graves, and Stokes, not only on the development of medical teaching in Ireland, but on the contemporary advances of the science and practice of medicine in the sister countries and in Europe, cannot be over-estimated, and the New Sydenham Society confers a great boon on the student of to-day by placing the works of the two latter physicians within his reach. Would it not be a matter of historical justice to unearth the works also of the former?

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. Lond., M.R.C.P., Physician to the Queen's Hospital, Birmingham. Third Edition. London: H. K. Lewis: 1884.

WITHIN a year from the appearance of the second edition of this excellent little work another has been called for, which is the most certain proof of its usefulness. Dr Carter wrote this book with the intention of producing "*a simple introduction* to the study of medicine," and he has succeeded admirably in carrying out his design. To all students entering upon dispensary practice, it has been and must continue to be invaluable, not only on account of the concise descriptions of disease, but from the presence also of some useful formulæ for the young prescriber, which are meant "to suggest in a general way the lines of treatment hitherto adopted." This third edition has very few alterations, as the second was marked by considerable changes, which brought it thoroughly up to the present time. We can heartily recommend the work to all who stand in need of an introduction to medicine.

Insanity and its Treatment: Lectures on Treatment, Medical and Legal, of Insane Patients. By FIELDING BLANDFORD, M.D. Oxon., etc. Third Edition. Edinburgh: Oliver & Boyd: 1884.

IT is scarcely needful to write a review of Dr Blandford's book on *Insanity and its Treatment*, which has now come to a third edition. Written by a man thoroughly acquainted with the subject, it is admirable for comprehensiveness, clearness, and conciseness. There are many evidences in the present edition that the author has kept a watchful eye on the progress of psychiatry and the pathology of the nervous system. While Dr Blandford retains most of his well-known views on different disputed points of insanity, we notice that in one instance he has returned to a view which he had renounced. "In 1866," to quote Dr Blandford's words, "I said that general paralysis 'seems to be the peculiar degenerative inflammation of the cortical part of the brain, ending in total annihilation of the life, that is, of the functional activity of the part.' In the former edition of these lectures I inclined to the theory of Drs Poincaré, Bonnet, and Westphal, that the disease is primarily one of the sympathetic ganglia, the lesions of the cerebrum and spinal cord being secondary. My chief reason for advocating this theory was the fact that paraplegia in certain cases had existed for years before mental symptoms appeared. But I now think that Professor Ferrier's experiments warrant our belief that such paraplegic symptoms may be sometimes due to cerebral lesions and not to spinal, and that the cortical portion of the brain, and not the spinal cord, may be the seat of the disease throughout. Whether this be so or not, we may at any rate assume that the grey matter of the cerebral or the spinal centres is the seat of the morbid lesion, the essential nature of which is a slowly progressing degeneration of an inflammatory character."

We do not think Dr Blandford wrong in giving up the view about the dependence of general paralysis on degenerations of the sympathetic, for careful microscopic observers have failed to find anything peculiar in the trunks or ganglia of these nerves. The third edition of the book was published before the Beiträge of Dr Franz Tuczek, who has discovered important lesions in the nerve fibres of the brain which he regards as the characteristic, and perhaps the most important, lesions in general paralysis.

Sleep-Walking and Hypnotism. By D. HACK TUKE, M.D., LL.D. London: J. & A. Churchill: 1884.

BY far the most important contributions which medical men have given to psychology are the observations upon somnambulism and hypnotism. Sleep-walking has been described by the writers of antiquity, but it is about a hundred years since Mesmer announced his discovery of the art of throwing people into the magnetic sleep. Such experiments were sure to attract attention, but they were mainly taken up by mystics and imaginative persons who could not resist the temptation of arriving at the results they themselves wanted. Dr Hack Tuke does full justice to the admirable experiments of Braid, which, he says, "attracted, it must be confessed, very limited interest among medical men in England." It cannot be said this was the case in Edinburgh, where the late Dr Gregory, Professor of Chemistry, made such experiments fashionable, though it is to be regretted that he allowed himself to be led into serious errors. Dr Hughes Bennett's pamphlet on *The Mesmeric Mania of* 1851 was written in a more scientific spirit. Mr Braid explored the subject so successfully that for twenty years little or nothing was added to our knowledge of the subject. Within the last four or five years, however, hypnotism has been the subject of numerous observations by distinguished physicians in France, Italy, and Germany. In London Dr Hack Tuke has made a number of experiments on sleep-walking, which he has already published in the *Journal of Mental Science*. In the present little book the reader will find a well-written summary of our knowledge on the subject, with all the recent additions made by Charcot, Richer, Tamburini, Seppilli, and others.

The subject, like every other connected with the human mind, has still many unexplored depths. It has been agreed that information on somnambulism should be sought by the committee for the collective investigation of disease connected with the British Medical Association. At page 47 of Dr Hack Tuke's book there is a circular of inquiry containing twenty-five questions, which it is desirable every one should fill up who has observed a case of somnambulism. Medical men and head-masters of large boarding schools, and others who have the supervision of large numbers of young people, might give useful information. In the meantime our thanks are due to Dr Hack Tuke for having brought his well-tried ability to the examination of so interesting a subject.

Manual of Diseases of the Throat and Nose. Vol. II. *Diseases of the Œsophagus, Nose, and Naso-Pharynx.* By MORELL MACKENZIE, M.D. London: J. & A. Churchill: 1884.

THE author's manual has been completed by the appearance of the second volume, and a work is now presented to the profession which, alike from the thoroughness of literary research which it evinces, as well as from the wide practical experience of the writer which it records, is far ahead of any other work on the subject with which we are acquainted.

This volume is divided into three sections,—the gullet, the nose, and the naso-pharynx having each one devoted to its consideration,—and the various diseases, abnormalities, and deformities of these regions are discussed in such a clear and exhaustive manner as to fairly place the work outside the range of ordinary criticism.

The introductory section deals with the anatomy, examination, and diseases of the gullet. The examination may be conducted by means of sounding, by auscultation, or by œsophagoscopy. The second of these deserves to be more widely practised than is at present the case, but the latter method appears to be somewhat difficult of accomplishment, and its use will probably be always more restricted than the others. In the hands of the author, however, œsophagoscopy seems to have yielded some very striking and satisfactory results.

Under the heading of traumatic œsophagitis we think that, considering the frequency of its occurrence, reference might have been made to carbolic acid as a cause, and to the observations of Lemaire, who found the acid itself much more poisonous than when dissolved in oil, probably because in the latter case absorption is much slower. In œsophagitis, therefore, due to the action of this agent, free ingestion of oil would serve a double purpose.

In the chapter on cancer of the gullet, the author rightly directs attention to the fact that the accompanying dysphagia may arise *suddenly*. We believe this to be the case more frequently than is generally recognised, as in examples reported by Pugin Thornton and others, including the author himself. We therefore think the author is scarcely warranted in stating (p. 91) that, in spasmodic stricture, " the symptoms are suddenly, not progressively, developed as in cancer." In regard to the prognosis of the disease, we agree with the author as to the erroneousness of the views of Rokitansky, who, from the frequency of cicatrices in the œsophagus, states that cancer in this situation is often cured.

The author contrasts the relative value of œsophagostomy and gastrostomy, and concludes that, of the two, the latter is the safer, easier, and more effectual. In reference to the latter operation, we are pleased to observe that amongst the earlier operators (10th) is a country surgeon, now in practice in this city.[1]

The second section of the work is devoted to the subject of nasal diseases. As is the author's custom, this is handled in such a complete and able way as to be a model of thorough accuracy and scientific research, and any divergence of opinion expressed in the present notice can only be in regard to a few comparatively unimportant details.

In writing of nasal catarrh in its chronic form, the author states that it may arise reflexly from disease or injury of the fifth nerve. He omits, however, to state what we are inclined to think is not uncommon, that the converse may take place, for, as stated by Fränkel, affections of the fifth nerve (neuralgia) are sometimes the *result* of nasal catarrh. He has also omitted to state that, as a consequence of nasal disease, a retro-pharyngeal abscess may be developed on account of the lymphatics of the nose communicating with a gland in front of the vertebræ.

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[1] *Edinburgh Medical Journal*, vol. xviii. p. 36.—Case of Gastrostomy, by Francis Troup, M.D. This case was the first performed and recorded in Scotland.

The treatment of the various forms of nasal catarrh, including hay fever, is fully given. Since the publication of this volume we have noticed that the author recommends the use of the hydrochlorate of cucaine as likely to prove of service in hay fever. This drug does not influence, unless temporarily, the course of an ordinary acute nasal catarrh, as we have lately had opportunities of witnessing. In the treatment of dry catarrh and ozæna, when crusts form in the vault of the nose, we have found the use of the ordinary syringe the most simple and efficient means for their removal, the point of the nozzle being, of course, directed almost vertically upwards.

Under epistaxis, the author omits to state the value of this as a frequent symptom in threatened uræmic attacks owing to increased arterial tension,—as, for instance, in Bright's disease.

The author discusses fully the causal relation of nasal polypus and obstruction to asthma. We have, however, witnessed a case in which neither polypus nor turgescence of the nasal mucous membrane was present, and in which violent paroxysms of asthma were of nightly occurrence. The nasal mucous membrane in this instance was markedly atrophic, and decidedly hypersensitive. That the asthma depended on this irritability of the membrane was indicated by its disappearance on the employment of appropriate topical remedies. Nasal obstruction, therefore, whether caused by a polypus or by swelling of the mucous membrane, cannot be said to be the sole cause of nasal asthma. We are rather disposed to think that the cause is always to be found in an abnormal irritability and proneness to reflex excitability of the mucous membrane, than in the presence of any obstruction of the nasal passages.

In enumerating the various possible causes of anosmia (loss of sense of smell), the author omits to notice a peculiar local cause described by Hutchinson. This consisted in such a diminution in the projection of the inferior turbinated bone, as practically to amount to its complete absence. The consequence of this was that in inspiration the air, taking the shortest possible passage to the lungs, coursed directly *backwards* without reaching the region of the olfactory nerve. This was remedied by the application of an artificial nosepiece, with such an opening as directed the current of air *upwards*, and so caused it to bathe the area of the sense of smell.

The work concludes with an appendix containing specia formulæ for topical remedies, mostly selected from the Throat Hospital Pharmacopœia. These cannot fail to prove of service to the practitioner.

Illustrations, several of them original, are freely interspersed throughout the volume, as are also full descriptions of the various diagnostic and therapeutic instruments, many of which are the invention of the author himself.

Altogether, we have no hesitation in repeating our high estimate of the value of the work, the production of which confirms what has long been the opinion of the profession, that its author is the most erudite and skilful laryngologist of the present time.

The Different Aspects of Family Phthisis in Relation especially to Heredity and Life Assurance. By REGINALD E. THOMPSON, M.D., Physician to the Hospital for Consumption and Diseases of the Chest, Brompton. London: Smith, Elder, & Co.: 1884.

AT the present time, when the influence of heredity on health and disease is receiving more attention than in any previous age, it is a pleasure to meet with so scientific a contribution towards the study of disease-inheritance as that contained in the work before us. Its value is very great, as will at once be grasped when we say that the work is based upon the cases recorded at the Brompton Hospital during the last twenty-five years. The various steps of the reasoning process have been taken with a care that cannot fail to lead to correct induction, and we would therefore recommend all who are interested in the subject of hereditary disease to peruse this work.

After briefly dwelling on the significance of family phthisis, the author passes in review the evidence of the inheritance of phthisis, and formulates three propositions:—

1. Individuals who give a history of family phthisis are more liable to phthisis than the community at large.

2. Consumptives who give a history of parental phthisis are disposed to be attacked by the disease at an earlier period of life than those who have no such history.

3. Consumptives who give a history of phthisis in both parents are disposed to be attacked at an earlier period of life than those who have a history of single heredity only.

He goes on to discuss the value of the evidence on which the investigation is based, and the extent of family and hereditary phthisis, in doing which he states his opinion that the discrepancy which has hitherto been accepted as proving that women are more liable to the influence of heredity than men, has been based upon insufficient evidence.

The features of acquired and of hereditary phthisis occupy two most interesting chapters, and the portions of the book dealing with the influence of the father, the influence of the mother, and the effect of double heredity are of great value. The author cites several instances of atavism, and concludes from his researches that such cases, with one silent generation intervening between grand-parent and grandchild, show the influence of heredity by early invasion of the disease, equal in many cases to the premature attack under the influence of double inheritance. He has not seen evidence that more than two generations may be passed over with the development of the disease in subsequent generations, but will not make any decided statement as to extinction of taint, and thinks that "we may positively conclude that the interposition of two silent generations will not in all cases suffice for such an extinction of taint."

The different modes of inheritance and the laws of phthisical inheritance are treated of in a philosophical manner, and family phthisis is then considered in its relation to life assurance. The concluding chapter on the prevention of family phthisis contains some wise reflections on the marriage of those who are liable to phthisis, on the selection of out-door work rather than brain work for the children of the phthisical, and on the supreme importance of manly games for the growing generation of women. "Prevention is better than cure"—such is the motto which he adopts, and we are sure all will cordially agree with him.

In conclusion, we would express the conviction that this work, involving as it has done vast labour in the collection and examination of wearisome statistics, confers a signal benefit upon our profession, for which our warm thanks are due to the author.

Micro-Organisms and Disease: An Introduction into the Study of Specific Micro-Organisms. By E. Klein, M.D., F.R.S., etc. London: Macmillan & Co.: 1884.

The papers on this subject, which attracted so much attention when appearing recently in the *Practitioner*, have been collected and published in a small and very handy volume. The introductory chapter unfolds the plan of the work, and points out the conditions which must be fulfilled before it can be said that particular organisms have any relationship to the causation of a particular disease. In the earlier chapters (I.–V.) the author describes the various methods of investigation employed. For microscopic examination, he, like other workers in the same field, gives preference to Zeiss's instrument, with Abbe's condenser, and recommends examination of fresh unstained as well as prepared and stained specimens. For culture material, solid media are found to be the best, and of these Klein prefers a mixture of agar-agar (Japanese isinglass or gelose) and peptone-sugar solution. "It is beautifully limpid and solid, and makes an excellent nourishing material." The vessels used in cultivation, along with the cotton-wool plugs, must, of course, be thoroughly sterilized in a hot-air chamber. The instruments are best treated by heating in the open flame of a

Bunsen burner. "One ought to keep a special set of instruments, the blades of which are capable of being heated in an open flame without being spoiled." In order that his inoculations may be absolutely free from any risk of contamination by other organisms than those with which he is working, Klein uses a fresh capillary glass pipette, made just before it is required, instead of the glass syringe of Koch, to which organisms may adhere from a previous inoculation. The operation of decanting the sterile fluid culture media into the sterilized test-tubes and flasks, is one that is attended with the risk of contamination from air-organisms. It is therefore done as rapidly as practicable in a still atmosphere, and the cotton-wool plugs replaced immediately the decanting is done. The tubes and flasks containing the material are then subjected to boiling, put in the incubator for twenty-four hours, boiled again, and put back in the incubator, to remain there for two or three weeks. It might be thought that all this trouble would be saved by decanting under a carbolic spray, but it is interesting, in connexion with recent experiments made in Edinburgh, to note that Klein does not think this practicable. It "possesses many unpleasant drawbacks; besides, in some instances when I used it there was really a greater percentage of contaminated tubes than without it. I therefore do not use the spray."

Chapters VI. to XVI., inclusive, deal with the morphology and physiology of those micro-organisms which bear any relation to disease. The classification of Cohn is adopted—(1) Spherobacteria micrococci; (2) bacteria or microbacteria; (3) bacilli or desmobacteria; (4) spirilla; (5) spirochaetæ. The micrococci, bacteria, and bacilli are again subdivided, according to their chemical and physiological function into—(*a*) Septic or putrefactive; (*b*) zymogenic, or those associated with definite chemical processes; (*c*) chromogenic, or pigment forming; (*d*) pathogenic, or those intimately connected with particular forms of disease.

In the latter chapters, the relations of septic to pathogenic organisms, the vital phenomena of these, and the important questions of vaccination and immunity, and of antiseptics, are considered. For the author's teachings and opinions on those points we refer the reader to the work itself. It is well worth every practitioner's perusal. A desire for such a book has often been expressed. It could not come from any more distinguished worker or higher authority than Klein himself.

Fat and Blood: An Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. WEIR MITCHELL, M.D., etc., etc. Third Edition. Philadelphia: J. B. Lippincott & Co.: 1884.

THIS edition has been carefully revised and in part re-written.

The nature of the work is now familiar to the profession, and so need not be dwelt upon here. It is only necessary to say that the judicial manner in which the author has presented his statements, and the like spirit having pervaded the advocacy of the cause by its English apostles, have largely removed the stigma of charlatanry with which it was in the minds of many at first associated. In fact, the danger now is, as Dr Mitchell indicates, not that the method he has applied with such success should be left to the charlatan, but that it may be used in unsuitable cases, and thereby become discredited. He is evidently conscious of this when he refers to its possible utility in some cases of phthisis, and we hope the author will be careful in not seeking to extend its application in directions in which there are not clear indications for so doing.

In many cases of neurasthenia and hysteria few will now question its value, while the success of the method will do much to establish the value of absolute rest, both mental and physical, especially when combined with passive exercises, as a remedial agent in place of the more popular and often erroneous idea of invalid carriages, and so forth. Some interesting cases are related, bearing on the treatment of obesity, associated with anæmia, and some indications are given that the influence of a purely milk diet upon the urinary secretion is being studied, and it may be hoped these will be continued, and the results in due time submitted to the profession.

Intestinal Obstruction. By F. TREVES, F.R.C.S. London: Cassell & Co.: 1884.

IN reading over the book before us, we naturally turned with most interest to see what Mr Treves had to say on the subject of treatment.

The first point referred to is the important and difficult one of feeding the patient. Mr Treves says: "In not a few instances a process of spontaneous relief is found to be nearly complete at the time of death, and to have been arrested by a fatal exhaustion." As this is certainly true, it comes to be of vital importance to consider how nourishment is to be administered to one who vomits all that is given by the mouth, and is irritated and injured by all that is administered by the rectum. Our author does not settle this question, but says that enemata should always be resorted to, and never any food given by the mouth. With this we cannot wholly agree, for we think there may be cases in which, under the influence of morphia, small quantities of food may be retained, while on the other hand there are cases in which all injections are injurious or rejected. But still there remain a few cases in which nothing can be given, either by mouth or rectum. In such, undoubtedly, operative interference is indicated; but should expectancy be decided upon, what are physicians to do? We get no assistance from Mr Treves. Must we rely on morphia administered hypodermically as both food and drug?

As to morphia, there is no doubt that it is the most valuable and reliable remedy in cases of obstruction. It relieves pain, flatulence, sickness, and even, when well pushed, the thirst which it at first excites. Mr Treves's only objection to morphia is that it may obscure diagnosis. But except in cases of hernia, in which diagnosis should be easy, we would rather have our patient thoroughly under the influence of morphia than have a perfect diagnosis at the risk of injuring the patient. We think that in some instances there is too great a desire for accurate diagnosis. Why should patients be stripped naked, and punched and hammered and subjected to distending enemata, and so forth? We think there is sometimes a selfish desire to make an accurate diagnosis, likely to be verified by a post-mortem examination, at the expense of the patient's comfort and chances of recovery. We believe that in most cases where hernia and stricture can be easily eliminated, it is safer for the patient to get him under the influence of morphia at once than to subject him to a minute examination for diagnostic purposes. Are not mistakes often committed after all? And are not enemata as often detrimental as beneficial, to say the best of them? On the other hand, do we not find that symptoms abate and relief often comes to the symptoms of obstruction under the beneficial agency of morphia alone? What are the dangers of obstruction? Are they not the sickness, spasms, pain, and secondary peritonitis? We have known an enema cause death by producing rupture and peritonitis; and we have not unfrequently seen, in cases of obstruction, sickness stop and the bowels act naturally under the administration of morphia. For all our faith in morphia, we would not despise operative interference. No one would surely think of treating a case of strangulated hernia with morphia alone. With Mr Treves, we believe, however, that operative interference, to be effectual, should be early. One would almost say that there is but a choice of two things. Either put and keep under morphia from the very first, or operate. In regard to operations, our author seems to have a preference for laparotomy. He considers that the risk of such operations has been greatly diminished by the introduction of antiseptic surgery, and that consequently simple opening into the peritoneal cavity by a central incision may be used as an aid to diagnosis. With regard to the performance of this operation, a great many useful directions and hints are given. Among these is one which we confess is new to us, the credit of which is given by Mr Treves to Mr Hulke. Briefly, it is as follows:—In a case of obstruction you have distended bowel above and flaccid bowel below the obstructed point. The obstruction is usually at the lower end of the small intestine. Consequently a collapsed piece of ileum will most likely be found in the right iliac fossa, which will prove a guide to the seat of the obstruction. We would conclude this notice by saying that Mr Treves has as much credit in this as in his former excellent production, recently noticed by us. "Intestinal Obstruction," as well as "Surgical Applied Anatomy," deserves a place in the library of both student and practitioner.

Diseases of the Rectum and Anus. By HARRISON CRIPPS, F.R.C.S. London: J. & A. Churchill: 1884.

WORKS on the rectum are neither few nor unsatisfactory. Mr Cripps's book, therefore, cannot be said to meet a want. For all this it is a praiseworthy production, being written in an interesting manner, containing valuable matter, some of which is original, and being illustrated with a large number of beautiful plates and woodcuts.

Perhaps the most important part of the book is the anatomical, in which Mr Cripps points out that a mistake has hitherto been made in regard to the attachment of the levatores ani. Our author states that the pubic part of the muscle is inserted into the coccyx, and that therefore the combined action of the two muscles is to draw the coccyx forwards and to compress the rectum laterally. In other words, they act as a sphincter.

In regard to the treatment of fistula, we think two points are worthy of notice. First, in speaking of treatment without cutting, Mr Cripps points out only two causes of want of healing after evacuation of the abscess: these are irritation of foreign matter entering from the rectum, and the movement of the sphincter. He forgets that want of proper drainage is another, and that the insertion and retention of a drainage tube for some time will sometimes cure a fistula, especially if it is an external blind one. The other point is the question of the treatment of the cul-de-sac that is not unfrequently present above the level of the internal opening, and extending up alongside the rectum. Mr Cripps agrees with Allingham that incision of this is necessary.

The description of fissure of the anus is good; and the risk of mistaking syphilitic for true fissure is not forgotten. Pruritus ani is said to be often due to minute thread-worms. This our experience confirms. A very large portion of the book is devoted to stricture and maligant disease. Mr Cripps warns against the forcible use of the finger in examination, and mentions the case of a woman in whom perforation into the peritoneum occurred after examination.

Fractures of the Ulna.[1] By Dr F. Brossard, of Lyons. Paris: Baillière et Fils: 1885.

Dr Brossard has managed to add something to our knowledge of fractures of the forearm. Devoted as his efforts have mainly been to demonstrating fractures of the lower end of the ulna, he has at the same time thrown valuable light on fractures of the radius.

The book itself we recommend to all as well repaying perusal. It is clearly printed and easily read, though extending to 120 pages. It contains several reports of cases, a large number of experiments, and four well-executed plates.

The points which Dr Brossard demonstrates by his experiments are—(1.) With the hand fixed in the straight position a blow on the elbow or humerus causes generally fracture of both bones. (2.) With the hand deflected to the ulnar side the ulna gives way, and with the hand turned to the radial side, the radius. (3.) Forcible supination fractures the ulna, while pronation fractures the radius.

Clinical observation proves that fracture of the ulna from indirect violence occurs generally in young subjects, and is often incomplete and subperiosteal, and consequently is liable to be overlooked or mistaken for a mere bruise.

We must admit that we are more interested in the radial points, though Dr Brossard makes most of his ulnar discoveries. We think his experiments throw considerable light on the mechanism of fracture of the lower end of the radius. (1.) He shows that forcible pronation causes fracture of the radius; and we know that the hand is pronated in the common fracture. (2.) Abduction, or inclination of the hand to the radial side, tends to produce fracture of the radius from a force acting between the palm of the hand and the humerus. This is the kind of violence that produces the ordinary fracture, and the hand must reach the ground in the position described, as any one can demonstrate to himself by putting out his hand in a position as if to save himself from falling forwards. The mechanism is still further cleared up by Dr Brossard's first plate, which represents a section made through a forearm and carpus in which the hand was pronated, dorsiflexed, and turned to the radial side before being frozen. In this figure the carpus and radius are in close contact and continuity. A second figure in the same plate represents a similar section with the hand turned to the ulnar side. In this the carpus is in close relation with the ulna. It is clear, therefore, that when a person falls forward and puts out his hand to save himself, the radial side of the carpus comes first to the ground and transmits the force directly to the radius, and as the radius is in the position of pronation the force acts obliquely, and thus drives the lower end backwards and to the ulnar side as well as upwards. Studying the position, it will be seen at the same time that the lower end of the ulna is free of the carpus, and is consequently driven past it or dislocated, as we know often happens.

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[1] *Des Fractures du Cubitus par cause indirecte, etc.*

Dr Brossard's researches also give one an insight as to how treatment, in the way of reduction and retention, should be directed. If we take the positions that are the opposite of those in which the hand is at the time of injury, we would find that treatment should be by flexion, supination, and turning the hand to the ulnar side.

Dr Brossard's conclusions at the end of his work are mainly as follows:—(1.) Fracture of the ulna by indirect violence occurs in young persons, and more frequently than is supposed. (2.) Clinical observation and his experiments show that this fracture may be caused by a vertical blow when the hand is turned to the ulnar side, or by forcible supination (torsion). (3.) These fractures are generally incomplete and subperiosteal—hence often overlooked. (4.) Twisting by pronation causes a split or crack of the lower end of the radius (an undescribed injury), often associated with an incomplete (greenstick) transverse fracture or diastasis.

The Surgical Treatment of Tumours and other Obscure Conditions of the Bladder. By WALTER WHITEHEAD, F.R.C.S.E., and BILTON POLLARD, M.D., F.R.C.S. Reprint from the *Lancet* with Cases. London: J. & A. Churchill. Manchester: J. & E. Cornish.

THIS is a most readable pamphlet, and one worthy of a place beside Sir H. Thompson's work on Tumours of the Bladder. The authors very neatly compliment Sir Henry, by saying that he is "entitled to the credit of having popularized an operation which had previously been confined to the practice of a few surgeons." Without entering on a discussion of the pamphlet or of the operation, we will merely mention that a list of 66 cases is given from various surgeons, and that notwithstanding a mortality of one-third of the cases, and an assured recovery in only a very few cases, the authors are in favour of the procedure of digital exploration of the bladder through an incision in the perineum.

Certain Forms of Club-Foot. By WM. H. Hingston, M.D., L.R.C.S. Edinburgh, Professor of Clinical Surgery, Montreal, etc. Montreal, 1884.

The Use of Forceps in the Treatment of Persistent Club-Foot. By E. H. BRADFORD, M.D., of Boston. Cambridge, U.S.A., 1884.

THESE two pamphlets prove how remarkably doctors may differ. Both surgeons, selecting the worst forms of equino-varus club-foot, prove to their own satisfaction, by a series of successful cases, that their individual methods of treatment are the best. Dr Bradford advocates force, without cutting (except ordinary tenotomy), and by means of an apparatus with three screws and pads, applied to the head of the astragalus on the outer side, and to the os calcis and first metatarsal bone on the inner side. He states that he could make the worst varus into a valgus club-foot. Prof. Hingston, on the other hand, claiming that there are certain "exaggerated" cases of varus, where all the textures are to blame, the skin not excepted, advocates that in such cases, stretching being out of the question, a full incision should be made down to the bone, dividing the whole of the soft parts on the inner side of the foot, skin, plantar fascia, muscles, tendons, and including necessarily the internal plantar artery and nerve. Such an operation could be admissible only in very aggravated cases and under strict antiseptic precautions. Prof. Hingston distinctly states the former necessity, but unfortunately does not understand the latter.

We find it difficult to reconcile these two writers' facts, unless in this way—that Prof. Hingston had less patience or ingenuity than Dr Bradford, or else had met with more intractable cases.

Practical Anatomy: A Manual of Dissections. By CHRISTOPHER HEATH, F.R.C.S. Sixth Edition. Revised by R. J. GODLEE, M.S. Lond., F.R.C.S. London: J. & A. Churchill: 1885.

THE fact that this manual has reached a sixth edition may be taken as a proof that it is a favourite one with students. We can scarcely say the same with regard to teachers, for, if current reports be true, there is more than one Scotch teacher who will not tolerate its presence in his dissecting-rooms. Its popularity with many students may be attributed to the shortness and conciseness of the text, and especially to the fact that it is well illustrated. It contains 274 woodcuts and 24 coloured plates, the latter from *Maclise's Surgical Anatomy*. This edition is an improvement upon its predecessor. The practical directions for dissections, which were very defective, have been somewhat improved. One might reasonably expect that a work on naked eye anatomy would be up to date. We cannot say that such is the case with this work. Thus, not to go far from home, in spite of all that Dr Hart has done for female pelvic anatomy, the vagina is still represented as a widely open tube. The fold of the buttock is stated to be formed by the lower border of the gluteus maximus, although we thought that Mr Symington had shown this to be erroneous.

The Pharmacopœia of the British Hospital for Diseases of the Skin, London. Third Edition. Edited by BALMANNO SQUIRE, M.B. Lond., Senior Surgeon to the Hospital. London: J. & A. Churchill: 1884.

ANY argument for the existence of special as distinguished from general hospitals must be based on the principle that the study of the particular diseases for which the hospital is intended is in it more carefully conducted, and that the public should in this way benefit both directly and indirectly. It is in the matter of treatment that this advantage—if there be any, which is more than questionable—should be chiefly seen, and Mr Squire possesses exceptional opportunities of obtaining and making himself acquainted with new drugs in a pure state. We should expect, therefore, to find in the little book before us not only the latest and best formulæ, but the most recent additions to the therapeutics of skin diseases. We may say at once that any one who takes up the volume with this very reasonable anticipation will be grievously disappointed. The prescriptions contained in it are no doubt fairly good of their kind, but it is very far, indeed, from being, in its third edition, anything like up to date.

Guy's Hospital Reports. Edited by FREDERICK TAYLOR, M.D., and N. DAVIES-COLLEY, M.A., M.C. Vol. XLII. London: J. & A. Churchill: 1884.

THIS volume of the Reports contains, as usual, a large amount of useful as well as interesting reading, not only for the scientific, but for the practical medical man. It opens with a thoughtful and appreciative memoir of Hilton Fagge, whose death fourteen months ago was such a loss to the teaching power of Guy's Hospital Medical School, and this is followed by papers on Anatomy, Physiology, and Pathology, besides those devoted to clinical observations.

We are inclined to think that the most important piece of work which the volume contains is the paper on "Albuminuria and the Symptoms which Indicate its Gravity," by the lamented F. A. Mahomed, which, in addition to its intrinsic value, possesses a melancholy interest, coming as it does like a voice from the grave. No one in recent times has added more to our knowledge of renal disease than Dr Mahomed, and this contribution, marked, like all its predecessors, by rare clinical acumen and charm of style, increases our regret that the high mental gifts which promised so much for the future should be lost to us. The paper begins with a criticism of the evidence given by experimental investigations regarding the causation of albuminuria, and after giving a *résumé* of the leading facts, concludes that physiologists are not able to give much help in such pathological inquiries as that to which the paper is devoted, because they have no power to influence the rapidity of the capillary circulation, which is probably the most important factor in the pathological variations of arterial pressure, and throws out the hint that "it may be that in the varying rapidity of the production and discharge of carbonic acid and the absorption of oxygen, we may have the key to the control of the capillary circulation." The author dissents from the view expressed by Hamilton in the Glasgow discussion that the change in arterial pressure is caused by an alteration in the specific gravity of the blood serum, pointing out that changes in arterial pressure take place with great rapidity in scarlatinal albuminuria, and that it is highly improbable that changes in the specific gravity of the blood can occur with anything approaching the same degree of quickness.

The second part of the paper is devoted to observations of a clinical and anatomical nature on the pathology of albuminuria. In this section the author considers the case of albuminuria from venous stasis, from various forms of diet, from the influence of the nervous system, from interference with the functions of the skin and bowels, from structural changes in the kidney, and, lastly, from high arterial tension. Dr Mahomed takes occasion here to dissent from the view of Rosenstein that the glomerules normally allow the transudation of albumen which is reabsorbed in the tubules, as one which charges "nature with a very clumsy arrangement, quite unlike her usual simple and labour-saving methods." We find here also that the author cannot agree with Charcot that in cases where the disturbance of the general or local circulation determines albuminuria, it is neither the increase nor the decrease of the intra-glomerular pressure which is at fault; and that he states:—"What I believe is this, that the mere rapidity of the blood-flow through the glomerular vessels, while it permits of the exudation of water, does not permit of the exudation of albumen; that increased arterial pressure very severely affects the glomerules of the kidney, producing in them, when in a normal condition, not only a great increase of pressure, but also a great distension of their very elastic walls; that more blood will be poured into them than can be readily carried away by the capillary plexus, and consequently the rapidity of the blood-stream will be delayed. These conditions of distension and delay in the glomerules, when combined, are sufficient to produce a more or less severe albuminuria, but not necessarily any diminution in the quantity of urine."

In the third part of the paper, which is devoted to the recognition of albuminuria, Dr Mahomed gives his opinion that we should not limit ourselves to the use of heat and nitric acid, and that we can afford to disregard albuminuria altogether, because it is sometimes found with healthy kidneys, or else it behoves us to use the tests which are most likely to detect any forms of albumen that may appear in the urine. The paper closes with the narration of a number of cases illustrative of different points touched upon, and with the statement of the author's belief that no trustworthy opinion can be formed as to a case of albuminuria without the use of the sphygmograph.

There are two suggestive papers on Renal Disease by Goodhart; two cases by Sir W. W. Gull; an interesting discussion of the Theory of a Heat-Centre from a Clinical Point of View, by W. Hale White; two papers on Hypertrophic Cirrhosis of the Liver, by Price and Carrington; an analysis of cases of Aortic Aneurism Opening into the Pulmonary Artery, by F. Taylor; Notes on a Case of Hydrophobia, by G. N. Pitt, in which he was able to get a good view of the larynx during the spasms, and found that there was a spasm of the *abductors*, not the *adductors*, of the vocal cords; a very thoughtful paper on Hypochondriasis, by Savage; in addition to several surgical and obstetrical contributions which seem from their titles worthy of perusal.

Volume III. of the Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons, England. Second Edition. By Sir JAMES PAGET, Bart., with the Assistance of J. F. GOODHART, M.D., and A. H. G. DORAN, F.R.C.S. London: J. & A. Churchill.

THE preparations here dealt with are those illustrative of the morbid conditions affecting the teeth, jaws, alimentary canal, liver and gall bladder, the ductless gland, and the circulatory and respiratory organs.

The plan followed is as before good, and the specimens referring especially to diseases of the jaw, pharynx and œsophagus, hernia, and the circulatory organs, are evidently most valuable. Some quite unique as well as numerous examples of every disease known to affect each part being represented upon the shelves.

We are particularly pleased with the notes appended to many of John Hunter's preparations, taken from his writings as published or from his manuscripts; and can, when reading these, almost fancy we see Hunter sitting in his study as depicted by Reynolds in the well-known likeness, and pondering over some dissection or post-mortem examination which has revealed points anatomical, clinical, or pathological before unknown to him; and can almost believe we hear his remarks, so practical, pertinent, and full of acumen and true scientific thought, which fortunately we have handed down to us here and elsewhere.

The volume is a goodly one of 541 pages, giving a full description of 1392 preparations, well printed, and worthy of the great corporation, the fortunate possessors of such a world-wide known and valuable collection.

Glasgow Pathological and Clinical Society—Discussion on Albuminuria: its Pathology and Clinical Significance. Glasgow: A. Macdougall: 1884.

THE Society has done well in reprinting this most interesting discussion, as those who devote attention to the pathology of the kidney will be glad to have a copy in the separate form.

The greatest difficulty met with in an attempt to give any adequate estimate of the value of this discussion lies in the great array of facts and theories contained in the pages before us, and we can do little save indicate one or two salient features of the discussion.

If we attempt to classify the papers read before the Society, they fall naturally into three groups—physiological, pathological, and clinical. Of the physiological papers, or, as we may call them with greater accuracy, those which are mainly physiological, the few remarks by Professor Cleland, which are characterized by their thoroughly scientific tone, pointed out some of the difficulties that beset us in comprehending the functions of the kidney. His words are full of thought, and tend to produce a cautious spirit in others. But the papers of Drs Newman and Robertson would lead us to regard the youthful physiologists of Glasgow as gifted with greater brilliancy of imagination than depth of thought or accuracy of knowledge.

Of the pathological contributions, that of our late colleague Professor Hamilton is, to our mind, as usual all too physical. We cannot even admit the possibility that complications in cases of Bright's disease are due to an alteration in the specific gravity of the blood. As Dr Mahomed pointed out, the changes of density must be of extremely rapid development, must occur even in a few hours, to account for some of the circulatory phenomena. The papers of Professor Greenfield and Dr Coats are of great value, although we are not inclined to agree with the former as regards some anatomical details, or with the latter on the question of the filtration hypothesis. With the excellent remarks of Mr Steven we are inclined to agree almost entirely.

Turning to the clinical aspect of albuminuria, we find a large number of very interesting and highly important papers, but in this place we must select one point, and one point only, to which our criticism must be confined. That point is the occurrence of albuminuria in persons who appear to be healthy, or, as Professor Roberts chose to call the condition, physiological albuminuria. The use of this term we cannot but deplore. No one would dream of disputing Dr Roberts' facts, but none the less do we object to this mis-use of the phrase. As Professor Gairdner observed in his paper, we should not think of speaking of a physiological cardiac murmur, or of physiological crepitation of the lung, or of physiological hæmorrhages from mucous membranes. If we may quote some of Professor Greenfield's words, we find him saying, "if by albuminuria we mean the presence of serum albumen in the urine in easily recognisable quantity, I do not think we are justified in speaking of a *physiological* albuminuria. By a physiological albuminuria we should mean a normal albuminuria. As the term has been used, 'physiological' has been made to cover all those forms of albuminuria in which no traceable organic disease is present. Now, by a pathological albuminuria I mean an albuminuria produced by derangement of function, as well as by derangement of structure. If albumen can appear in the urine as a result of vaso-motor paralysis, dependent on central nerve disease—and under disease we must include derangement of function—it is none the less a pathological albuminuria, however slight may be the derangement of health which produces it, and however it may act. It is an entire mis-use of terms to speak of this as physiological albuminuria." With all this we cordially agree. Out of numerous cases of albuminuria in the apparently healthy, we have never yet met with one in which the nervous and the digestive systems were both in a healthy state. Either one or both have been in a condition of debility. And we heartily endorse the words of Professor Gairdner when he says, "I consider that albuminuria, in a practical sense, is, to say the very least, a danger signal, and a danger signal of the first importance. It may consist with apparent health; it may even, for aught I know, consist with long life in certain particular cases. So, too, the danger signals may be disregarded in a particular line of railway for a time, and yet no train may go into collision; and in like manner albuminuria may be there, and the person may live on, nevertheless; but a life under these circumstances is always subject to increased risk, and in all probability that state of matters cannot be regarded as physiological."

We would fain dwell on the philosophical words which fell from Dr Gairdner's lips on the question of renal pathology; on Dr Granville's eloquent remarks on nervous albuminuria; on the excellent classification of albuminuria by Dr Mahomed; on the subject of toxic influences on the kidney by Dr Finlayson; on the connexion between the puerperal state and albuminuria by Professor Leishman; on some of the clinical aspects of albuminuria by Drs Middleton, Perry, and Henderson, to say nothing of the subject of urinary tests by Drs Roberts, Kirk, and Oliver, and of the concluding remarks of the President. And in bringing this short notice to an end, we would express the hope that the Medico-Chirurgical Society of this city may at no distant date arrange for such a discussion as this of the Glasgow Pathological and Clinical Society.

Transactions of the Academy of Medicine in Ireland. Vol. II. Dublin: Fannin & Co.: 1884.

THIS handsome volume speaks for a large amount of useful work done by the Academy of Medicine, and is specially interesting, inasmuch as, in addition to its other contents, it has the first annual report presented at the first annual general meeting. From this we learn that the meetings—which take place once a week, and are devoted in rotation to the sections of pathology, surgery, medicine, and obstetrics—are held through the courtesy of the Colleges of Physicians and Surgeons in their Halls, a piece of hospitality which seems to us highly commendable. The council modestly give expression to their belief that this volume is "one most creditable in its matter, and in the manner in which it has been produced;" and we are much pleased to be able to state our honest conviction that the Academy deserves warm congratulation on the appearance of the Transactions.

The papers read are arranged under the heads of the different sections—medical, surgical, obstetrical, and pathological, and of the two sub-sections of public health and of anatomy and physiology. In the medical section there are several papers of considerable importance, and although it is perhaps invidious to single out any of these, we may be allowed to refer to one by Dr Magee Finny, on "Cases Illustrating the Essential Identity of Progressive Muscular Atrophy and Progressive Bulvar Paralysis;" to three by Dr J. C. Nixon on nervous affections; and to one by Surgeon-Major Gore on the "Ætiology of the Common Climatic Fevers of the Kumaon-Hill Ranges in North-Western Bengal," as being of special interest. The surgical and obstetrical sections have also an array of important subjects, but it is in the pathological section that most work seems to have been done. Medical and surgical morbid anatomy are represented by some very interesting papers, and there are even contributions to comparative morbid anatomy, at least in the horse. In the sub-section of public health, Dr Tweedy ably discusses "State Control for Chronic Inebriates." We heartily endorse his opinions, and earnestly hope to have this question soon within the range of practical politics, so that a powerful government may be able to pass such a measure as would for the future prevent mistaken ideas of the liberty of the subject from hindering the dictates of justice. To the sub-section of anatomy and physiology our old colleague Dr D. J. Cunningham contributes an able paper on the "Musculus Sternalis," and Mr J. A. Scott some "Experiments on the Central End of the Pneumogastric Nerve." Both are of high scientific value. In conclusion, we rejoice that the amalgamation of the medical societies has been attended with such gratifying results, and would express the pleasure we have received from the perusal of the Transactions issued by the united Academy.

The Therapeutic Gazette. Edited by HORATIO C. WOOD and ROBERT MEADE SMITH. George S. Davis: Detroit, Mich., U.S.A.; and H. K. Lewis: London: January 1885.

THE January number commences the *third series* of this now well-known and much-valued journal. It is, however, the commencement of Vol. IX. During the past *eight* years this journal, more than any other, has advanced our knowledge of therapeutics. The publisher has spared no expense to obtain accurate knowledge of new and rare medicines, many of which are destined to find a permanent place in all pharmacopœias.

The journal is now to be edited by Dr H. C. Wood, Professor of Materia Medica in the University of Pennsylvania, and Dr R. M. Smith, Professor of Comparative Physiology in the same University. Under such able editorship this journal should not only maintain its high character as a journal of therapeutics (to which it is exclusively devoted), but also continue to increase in popularity and usefulness. We wish it a wide circulation.

An Experimental Investigation of the Physiological Action of Saline Cathartics. By MATTHEW HAY, M.D. Edin., Professor of Medical Jurisprudence and Medical Logic in the University of Aberdeen. Edinburgh: Maclachlan & Stewart: 1884.

THIS work, which is on all sides admitted to be the most important contribution made to pharmacology within the last year or two, saw the light originally as a graduation thesis, and was subsequently published in the *Journal of Anatomy and Physiology.* We are glad that its author has republished it in separate form, as it ought to be in the hands of every one who takes an interest in the progress of therapeutics.

After giving a brief sketch of the views held on the subject, from the times of Glauber, Seignette, and Grew, down to our own day, the author states the plan of his investigations and fully describes his various experiments. It is impossible for us in this brief notice to follow him through his observations, but we would refer to a few of his conclusions which are of most interest to us as physicians. He states that a saline purgative always causes secretion from the alimentary canal, and that its amount depends on the quantity, strength, and nature of the saline solution; that the secretion is probably caused by the bitterness, as well as the irritant and specific properties of the salt, and not by osmosis; that the absorption of the secreted fluid is hindered by the low diffusibility of the salt; that between stimulated secretion and impeded absorption fluid accumulates in the canal; that this fluid, partly from ordinary dynamical laws, partly from stimulation of the peristaltic movements excited by distension, reaches the rectum and causes purgation; that the salt does not purge when injected into the blood, and causes no intestinal secretion; that it does not cause purgation when subcutaneously injected, unless it sets up local irritation of the abdominal subcutaneous tissues, which act reflexly on the intestines; that sulphate of soda has no poisonous effect when injected into the circulation, but that sulphate of magnesia so injected is highly poisonous, paralyzing first the respiration and afterwards the heart, as well as abolishing sensation or causing paralysis of the sensory-motor reflex centres; that the amount of the normal elements of the urine is unaffected by the salt, and that after the administration of sulphate of magnesia more of the acid than of the base is excreted in the urine.

Truly, as its author remarks, "this is a long research, and has involved much labour." The labour, however, has not been thrown away, and Professor Hay has the reward of knowing that by his investigation he has cleared up much of what has been obscure, and that he has thus conferred a benefit on the profession at large.

One Hundred Years of Publishing—1785 *to* 1885.

MESSRS LEA BROTHERS, the well-known medical publishers of Philadelphia, having completed the first century of their firm, have issued a short and interesting narrative of its history. From it we learn that Mr Mathew Carey, the founder of the house, was born in Dublin in 1759, and selected the occupation of a printer and bookseller, but from the age of 20 he took an active part in the political movements of the day. Ireland became in consequence an unsafe residence, and in 1784 he escaped to the United States with only a few guineas in his pocket. Lafayette advanced him 400 dollars, with which he started a daily journal, the *Pennsylvania Evening Herald.* The publication of books and periodicals followed, and Mr Carey established a successful business, continuing also to take an active share in the political and social questions of the day. In 1817 he associated with him his eldest son, Henry C. Carey, and four years later his son-in-law, Isaac Lea, by which time the house had taken a leading position in the publishing trade of the United States. The firm continued to prosper as Carey & Lea, and after various changes the present copartnery of Lea Brothers & Co. was established in January of the present year. From an early period the house devoted much attention to medical literature, and ultimately concentrated its zeal on that department of its extensive business. Its imprint will be found on the works of many of the most notable of our professional brethren in America, and its famous periodical, *The American Journal of the Medical Sciences*, of which the late Dr Isaac Hays was editor for more than half a century, has been eminently instrumental in gaining for American medicine a world-wide respect. Long may the business house, founded a hundred years ago by the clever young Irishman, Mathew Carey, continue to prosper, and to entertain, with just pride, "the belief that its name on a title-page is in some sort an indication of the worthiness of the volume in which it appears!"

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIV.—MEETING IV.

Wednesday, 4th February 1885.—Dr Littlejohn, *President, in the Chair.*

I. Election of Ordinary Members.

The following gentlemen were elected Ordinary Members of the Society:—Edward M'Callum, M.A., F.R.C.S. Ed., L.R.C.P. Ed., Edinburgh; T. Edgar Underhill, M.B., C.M., F.R.C.S. Ed., Tipton Green, Staffordshire; John Struthers Stewart, L.R.C.P. & S. Ed., Edinburgh.

II. Exhibition of Pathological Specimens.

1. *Dr F. M. Caird* showed a series of specimens of DISEASES OF THE TESTICLE. The specimens were prepared in the surgical and anatomical departments of the University, after the method devised by Professor Hamilton of Aberdeen. The testicles were injected with carmine or Prussian blue, hardened in spirit, washed, soaked in gum and sugar, frozen and cut in a microtome, and the sections then mounted in glycerine jelly between plates of glass. In this way entire transverse and longitudinal sections, illustrative of sarcoma, chondro-sarcoma, tubercular, syphilitic, and cystic disease of the testicle were obtained. The chief difficulty encountered in cutting the organs lay in the variable density of the new formations, so that it was not easy to get uniformly thin sections suitable for microscopic examination. Much valuable aid in mounting the preparations had been afforded by Mr James Simpson of the Anatomical Museum.

2. *Dr MacGillivray* showed (*a.*) a MELANOTIC SARCOMA occurring primarily in the lymphatic glands. (*b.*) A RECURRENT TUMOUR from the same case. The patient, a young married woman, had an ingrowing toe-nail. As a result the glands in Scarpa's triangle

enlarged. As they continued to do so after her confinement it was thought advisable to remove them. This was done with some difficulty, as the saphena vein was involved and had to be cut. They were at first thought to be simply enlarged and irritated glands, but on section and microscopic examination it was seen to be a well-marked case of melanotic sarcoma. The patient remained well for about four months. At the end of that time she complained of intense pain in the left iliac region, above Poupart's ligament. Peritonitis with diffuse swelling was present. After about a fortnight she recovered, but a hard mass about the size of an orange remained, with a tendency to further increase in size. After another attack of pain and peritonitis it was agreed that there must be a recurrence of the disease, and that it would be better to remove it. On cutting down above Poupart the tumour was found over the external iliac vessels, and adherent to them. The peritoneum practically formed a sort of capsule round a portion of the tumour. It was therefore opened during the removal of the tumour. The patient never absolutely recovered from the shock. Subacute peritonitis set in, and she died of exhaustion. The wound remained aseptic throughout, and was almost healed at the time of death. The points of interest in the case were the primary occurrence of sarcoma, more particularly melanotic sarcoma, in the lymphatic glands, and the peritonitis set up by an extra-peritoneal tumour. The foot was carefully examined, but showed no sign of malignant mischief.

3. *Dr Allan Jamieson* showed two drawings. (*a.*) The first represented a curious and uncommon affection of the skin, LICHEN MARGINATUS, on the back of a man, æt. 33. The eruption first appeared at the beginning of winter, and disappeared under local treatment. It recurred in the end of January. The disease began as little rounded spots, the centres fading away and becoming yellowish. It had been described under various names,—by the French as pityriasis maculata et circinata, and by Kaposi as a form of ringworm in which the disease spread with rapidity. Kaposi, however, made no mention of any fungus, and a careful examination of the scales from the case showed no fungoid growth. The disease seemed chiefly to affect adults, and more especially the back and chest. It was accompanied with considerable itching, and did not appear to be associated with any disorder of health. Local treatment alone seemed to affect it. Lassar's paste acted successfully before, and the same treatment was being applied now. (*b.*) The second drawing represented a very rare result, INTENSE BLACK PIGMENTATION occurring after PEDICULOSIS of the skin. It showed the front of chest and left shoulder of a man affected with pediculi for an indefinite period. He was a man of darkish complexion, and the pigmentation which followed the scratching of the skin was very marked.

III. ORIGINAL COMMUNICATIONS.

1. *Professor Grainger Stewart* read his paper ON A CASE OF TAPPING OF THE PERICARDIUM, AND ON TAPPING THE PLEURA IN CASES OF CARDIAC DISEASE, which will appear in a future number of this Journal.

The President expressed the feeling of indebtedness of the Society to Professor Grainger Stewart for his interesting and valuable paper. He intimated that he had received notes of apology for absence from Drs Balfour, Brakenridge, and Wyllie, as also from Professors Gairdner and M'Call Anderson of Glasgow. The latter gentleman had in addition sent a short note of his views on the operation of paracentesis pericardii, which he would now call upon the Secretary, Dr James, to read.

Dr James, Secretary, read the following remarks, which had been sent by Dr M'Call Anderson:—I am fully sensible of the honour which the council of the Medico-Chirurgical Society has done me in inviting me to be present, and to take part in the discussion upon paracentesis of the pericardium. I regret, however, that my professional engagements prevent me from accepting the invitation, and all the more as I shall thus miss the opportunity of listening to the paper of my friend Professor Grainger Stewart. I am not aware of its exact scope, nor of the points to which attention is specially to be directed; but I presume that, among them, the dangers connected with, the indications for, and the mode of performing the operation of paracentesis pericardii will be included. I may therefore be allowed to say that I think the dangers of the operation have been exceedingly over-estimated, and that if carried out with reasonable care by a skilful physician, it is probably not much more hazardous than the same operation upon the pleura. Cases necessitating such interference are in my experience by no means common, but I would not hesitate if I found that an accumulation of fluid in the pericardial sac was seriously embarrassing the circulation, and that there appeared a risk of its contributing to a fatal issue to the complaint were such active treatment to be dispensed with. I presume that no one nowadays would think of operating with an ordinary trochar and canula, but Southey's trochar is admirably adapted for the purpose. If, however, it does not succeed, the aspirator should be employed, Potain's being the one which I am in the habit of using. The needle should be small, not exceeding, in the first instance at all events, from $\frac{1}{16}$th to $\frac{1}{8}$th of an inch in diameter; and, as I have myself frequently suffered from leaving the testing of the instrument to others, I may add that we should always *personally* satisfy ourselves that it is in perfect order. Should there be any localized bulging I would probably select that point for the puncture, but if not, the fourth or fifth intercostal space, about 2 inches to the left of the sternum, would usually be chosen. The patient should be in the recumbent position unless the embarrassment of the respiration prevents it. The needle should be first embedded in the subcutaneous cellular tissue, and then the stop-cock being opened so as to complete the vacuum, it is pushed inwards and upwards until the fluid in the pericardium is reached. It is of importance to draw off the fluid very slowly, so as gradually to remove the pressure from the heart, and thus to avoid the risk of syncope. The following case illustrates some of the points to which I have thus briefly alluded:—On the 22nd of July 1879, a lad, 17 years of age, was admitted into the Western Infirmary complaining of severe cough and general dropsy. The cough had troubled him for six years, being always worst in winter, and during the last four winters he had several very severe attacks of hæmoptysis. During the previous winter the cough increased so much that he had to give up work about Christmas time. Two months later shortness of breath became a prominent feature, and his legs and body became swollen, the dropsy never afterwards disappearing. When admitted he breathed with difficulty, respiration being accompanied by audible wheezing. He had frequent and violent fits of coughing, and his face had a livid hue. On examining the chest anteriorly, the pericardial region was observed to be decidedly fuller than the corresponding part of the right side, and there was some bulging of the intercostal spaces; and, along with this, there was great dulness and resistance upon percussion. The dulness extended 2 inches to the right of the middle line, and round into the left lateral region; it reached upwards nearly to the clavicle, beneath which, however, there was a limited area of resonance, and the lateral limits of the dulness were much less at the upper than at the lower part of the chest. Posteriorly, percussion was clear, except at the left base, where the physical signs pointed to moderate pleuritic effusion. The exact position of the heart could not be made out, nor could the apex beat be felt. The pulse was rapid (112), very small, thready, and irregular. Harsh sonorous râles were heard all over the chest, but there was no complaint of pain anywhere. The feet and legs were œdematous, and there was slight distension of the abdomen, but no evidence of fluid in it. The liver was somewhat enlarged and tender, and there was some pain on pressure over the left hypochondrium. The urine was scanty, and contained a trace of albumen and of bile. At a consultation held on the 30th July, the diagnosis of pericardial effusion was confirmed, and it was resolved to remove the fluid by means of the aspirator. The spot selected for puncture was the fifth intercostal space, about an inch to the right of the nipple line. The skin having been frozen with æther spray, a medium-sized trochar and canula connected with Potain's aspirator was used, and 38 ounces of a light, straw-coloured fluid withdrawn. When the instrument was first introduced, it was evidently not in contact with the heart, but during the latter part of the operation the cardiac impulses distinctly affected the canula. There was no complaint of pain or of faintness during the operation, and after it the breathing became decidedly less laboured; and very soon there was a marked improvement in his appearance, which, previous to the operation, was characteristically cyanotic. That night he slept better than he had done for a long time previously. On the second day after the operation (1st August), it was noted that the area of dulness was considerably diminished, the diminution being most marked at the upper part and to the right. The heart sounds were now very distinct and more superficial, and the pulse was much stronger and more regular, though still frequent. The râles had in great measure disappeared from the chest, and the symptoms of passive congestion had to a large extent subsided. Towards the latter part of September he began to complain of pain in the abdomen, which now contained fluid; the legs were again œdematous, and the cough had become much more troublesome, but there was no distinct increase in the cardiac dulness. On the 30th of October, as the fluid in the abdomen had become excessive, it was removed with a trochar and canula. Its colour was dark amber, and it coagulated in a basin while being drawn. It measured 290 ounces. This, however, gave only temporary relief, as it soon collected again, and the dropsy of the subcutaneous cellular tissue became excessive. On the 24th November severe diarrhœa set in, and he died on the morning of the 30th. Unfortunately a post-mortem examination was not permitted. Although this case ultimately terminated fatally, there can be no doubt that the tapping of the pericardium gave decided relief, and prolonged life.

Dr Byrom Bramwell expressed the great pleasure with which he had listened to Professor Stewart's most important and practical paper. Amongst the many points of interest, the following appeared to him to be some of the chief. The case of pericarditis was interesting inasmuch as it did not, so far as he had gathered, appear to be due to rheumatism or any of the ordinary causes of pericarditis, but to have followed a chill. (Possibly it was secondary to some other inflammatory conditions within the thorax, which had resulted from the chill.) The hæmorrhagic nature of the effusion was also of interest. Professor Stewart had given some authorities to show that the effusion was more bloody in the pericardium than in the pleura. He was not prepared to deny that this was the case, but hæmorrhagic pericarditis was in his experience rare in the post-mortem room, except in cases of tubercle, cancer, or some general pathological condition, such as purpura. In his experience the effusion in cases of pericarditis was much the same as in cases of pleurisy. The main interest of the case was, however, the bearing it had on paracentesis pericardii. Professor Stewart was to be congratulated on the happy and successful issue of his treatment. Many of the points in the case went, he thought, far to establish the rules he had laid down for the performance of the operation. There were two points he would like to allude to. The point of puncture which Professor Stewart had advocated was not usually recommended. Almost all authorities agreed that the puncture should be made in the fifth interspace, midway between the nipple and the left border of the sternum, or if the heart were enlarged or tied down by adhesions, in the sixth or seventh interspaces, as recommended by Sibson. Perhaps Professor Stewart would be so kind as to inform the Society on what grounds he preferred the situation which he had recommended. Again, with regard to the amount of fluid which should be withdrawn, Professor Stewart advocated the withdrawal of a small amount, and directed attention to the fact that he (Dr Bramwell) had advised the removal of the whole. But he had especially guarded himself against the risk which Professor Stewart feared, by stating that if any indication of syncope or any other untoward symptom should arise, the aspiration should be at once stopped and the needle withdrawn. He took it the conditions were not altogether similar to those met with in pleuritic effusions. Some patients during the aspiration of a pleurisy complained of pain, dyspnœa, and faintness, and death had not unfrequently occurred. Dr Bramwell thought that in most of these cases the lung was probably tied down by adhesions, and that the disturbance caused by the production of a powerful vacuum, with probably in some cases effusion of blood or rupture of adhesions, was the cause of the untoward symptoms. He saw no reason to change his opinion, and provided that the fluid was slowly withdrawn, and that no unfavourable symptoms arose during the operation, he saw no reason why the whole of the fluid, if possible, should not be withdrawn. At the same time, he was prepared to agree with Professor Stewart that the withdrawal of a small quantity of the fluid might be sufficient. He had more than once known the withdrawal of a small quantity of pleuritic fluid followed by rapid absorption, in consequence, probably, of the over-distension, with resulting pressure upon the veins and lymphatics, on the pleuritic wall, being removed. Most authorities were agreed that when the amount of fluid was so considerable as to seriously embarrass the action of the heart, paracentesis pericardii should be performed. Professor Stewart went much further, and recommended paracentesis should be practised even when a small amount of fluid was present, and when symptoms of failure of the action of the heart were prominent. The desirability of operating under such circumstances appeared to Dr Bramwell to be doubtful. He did not see how a small amount of fluid in cases of simple pericarditis could *per se* be the cause of cardiac failure. Unless the fluid were acting injuriously mechanically he did not see any reason for interference. The difficulty was to be certain of the diagnosis when a small amount of fluid only was present. The fact that Professor Stewart had only operated twice showed that

cases demanding operative procedure were rare. The preliminary puncture with a hypodermic syringe had not, so far as he knew, been so prominently advocated before. He thought the point was one of great practical importance. It was not always easy to distinguish between an effusion into the pericardium and a dilated heart. In such cases puncture with a *clean* (aseptic) hypodermic syringe would not do any harm even if the case was one of dilated heart. The preliminary puncture with a fine hypodermic syringe would therefore in some cases be of great diagnostic use. With regard to the second part of the paper, he agreed with Professor Stewart as to the desirability of operating when any considerable quantity of fluid was present. So far as he knew, it was the general practice to puncture the pleura in cases of hydrothorax when anything like 60 ounces of fluid was thought to be present. He did not mean to say that this quantity of fluid was never found post-mortem, but it must be remembered that in some cases of this description there was reason to suppose that some of the fluid had been poured out during the last day or two of life—sometimes, he thought, during the last few hours of life. He was not previously aware of the fact that so much as 60 ounces of fluid could be present in cases of hydrothorax, with only one inch of dulness over the base of the lung. Such a condition must, he thought, be rare. When such a large amount of fluid as 60 ounces was found post-mortem, there was usually, he thought, some evidence of compression of the lung, and therefore presumptive evidence that the extent of dulness was considerably greater than an inch.

Dr Haddon thought it would be well if general practitioners gave their opinions on these questions a little more freely than they usually did. The first time he had seen the pleura tapped was by Professor Stewart in 1866 in the Children's Hospital. It was then customary to talk of tapping the pleura in the very way they talked of tapping the pericardium now. That case made a deep impression on his mind, and in practice he had since tapped very often, and sometimes perhaps rashly, but he always made his preliminary puncture with the hypodermic needle, and he never saw any harm result. In some instances, more particularly in one case which turned out to be a tumour of the lung compressing a bronchus, he had punctured without getting any fluid, but never saw a bad result from so doing. The patients were none the worse for the punctures. As to the operation of tapping the pericardium, he felt he could only theorize, as he had never performed it, but every one ought to have a theory to guide him when he came to have a case requiring this treatment. If he had a case with effusion into the pericardium and none into the pleura, he would do paracentesis of the pericardium, but if the pleura was also the seat of effusion he should empty it first. The point of puncture, he thought, should be left to the operator. He should also withdraw all he could. He had never seen fainting or other untoward symptom arise during the tapping of the pleura, but that possibly was because he tapped early. As to the second part of the paper, he should have thought it would have been a routine practice to remove any fluid wherever it was if it complicated the case. He was glad to hear that preliminary puncture with the hypodermic syringe was a routine practice in the clinical wards, and he did not agree with Dr Bramwell that the fluid in hydrothorax, or at least a large amount of it, was poured out in the last few hours of life. He was quite willing to accept the censure deserved if a case of his went to the post-mortem room with the large quantity of fluid found in cases of hydrothorax.

Dr Affleck was sorry he had not heard the whole of Professor Stewart's paper, but he joined with previous speakers in congratulating him on the happy result he had obtained. The operation of paracentesis pericardii was one rarely resorted to, because pericardial were not so common as other effusions. The results, too, could never be expected to be so successful, because they did not often contemplate tapping until the patient was in danger, and other conditions existed which went far to render the result doubtful. Sometimes pulmonary complications were present, but very often the condition of the heart itself was at fault. The cardiac muscle must often suffer in pericarditis. In the feeble flickering pulse there was evidence of myocarditis accompanying pericarditis, so that removal of the effusion did not always relieve. In Professor Stewart's case the pulse tracings would seem to show that the trouble was mostly caused by the pressure of the fluid on the heart; but in other cases the removal of the fluid had not the same good effect, showing that myocarditis was present. In many cases the operation was successful; in a large percentage it was not. In Hayden's book 13 cases were given in which the operation was successful in itself; in 7 the patient survived. In some instances mistakes had been made. Even Trousseau once mistook an enlarged heart for pericardial effusion. As to the operation, though a great many objections had been raised, he thought that with their present instruments there should be no difficulty in its performance. He agreed with Dr Bramwell that the place to puncture at was not very far from the sternum, where the pericardium might be entered with the greatest safety. He considered that the shock from the puncture should not be forgotten as an element of danger. With regard to the second part of the paper, he thought all of them went on the rule laid down by Dr Bowditch, that when there was mischief arising from fluid in the pleura it was well to operate, although here, as well as in pericardial effusion, rules could not be rigidly adhered to, but cases must be judged on their own merits, and according to the urgency of symptoms.

Dr James Ritchie thought those cases, in which the effusion into the pleura depressed the diaphragm, showed the advantage of having a definite rule as a guide to the amount of fluid that should be drawn off. The pulse should be watched, and if flagging occurred, or a short cough or troubled breathing, the operation ought to be stopped. Were the upper level of the fluid taken as the sole index of the amount of fluid present, probably the operation would be stopped before nearly all the fluid was removed, and in dropsical effusions it was of advantage to remove as much of it as possible. He remembered a case under Professor Stewart's care, in which, although the upper limit of the fluid was low, from 60 to 70 ounces were aspirated.

Dr William Russell hoped that Professor Stewart's paper would help to dispel much of the timidity with which paracentesis of the pericardium was regarded. He thought paracentesis of the pericardium was not more dangerous in itself than the puncture of any other serous cavity, so long as there was no mistake in the diagnosis, but this difficulty in diagnosis was the reason why practitioners usually approached the operation with some degree of fear. It had fallen to his lot to tap the pericardium in two cases, in neither of which had any unpleasant symptom occurred during or after the operation which might be ascribed to it. Death resulted in both from different causes, but in neither was the fatal issue hastened by the operation. In one case the wall of the ventricle was pricked, but apparently without any harm. Aspiration in cases of hydrothorax (from cardiac disease) did not receive in the special text-books on heart disease the prominence it deserved. He had had many opportunities of judging of its value, and he gave the proceeding his unqualified adhesion, and hoped that Professor Stewart's communication would lead to its adoption by many who did not at present practise it.

Professor Grainger Stewart thanked the Society for its very kind reception of his paper. He had also to thank Dr Claud Wilson for the care he had taken in preparing the notes of the case of pericarditis, and for the pulse tracings which he had taken. He disclaimed anything novel with regard to aspiration in hydrothorax, but as he found the practice was not so common as it should be, he had ventured to bring it before the Society. He valued very much Dr Affleck's and Dr Bramwell's remarks. He thought he was not sufficiently clear on the second rule. He wanted to say that if there was a copious effusion he should tap, but if there was a considerable effusion, not in itself sufficient to cause danger, but if attended with a fading pulse, which he supposed was due to myocarditis, then he should think it his duty to try paracentesis. Given such an indication for tapping (which he had in this case, for he thought there was myocarditis present in it), he should be particularly careful not to draw off too considerable a quantity, because the muscular fibre of the heart might be too weak to admit of this. As to the point of puncture, he agreed with Dr Haddon, but preferred to go outside the nipple line, further away from the heart muscle so as not to injure it.

2. *Professor Annandale* read his paper on AN OPERATION FOR DISPLACED SEMILUNAR CARTILAGE.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLVI.—MEETING II.

Wednesday, 10th December 1884.—Professor SIMPSON *in the Chair.*

I. *Dr D. Wilson* showed PLACENTA, from a case of placenta prævia.

II. *Dr Angus Macdonald* showed (1.) A LARGE CYST, removed from the left broad ligament. The cyst was unilocular, and contained 17 pints of clear fluid, giving a slight cloud on addition of nitric acid, and a copious white deposit with nitrate of silver. The pedicle was a long, narrow one, twisted, and it arose from the anterior surface of the broad ligament, close to the ovary, but the ovary did not form part of the pedicle. The left ovary was also removed on account of its being cystic. (2.) RIGHT OVARY AND OUTER PORTION OF BROAD LIGAMENT, removed from the same patient; the ovary was cystic. In the broad ligament, between its layers, in the situation of the parovarium, there was developed a small cyst, evidently one of the parovarian tubules distended. (3.) Dr Macdonald showed for Dr H. Peddie the OVUM of a patient with a history of missed miscarriage. Round one of the legs of the fœtus the umbilical cord had fixed itself in a firm knot, which was thought might account for the death of the fœtus.

III. *Dr Skene Keith* showed a FIBROID UTERUS, which illustrated the difficulty, in some cases of fibroid tumour, of removing the ovaries, owing to their altered position, due to the rotation of the uterus and the fixation of one or both in some part of the pelvis.

IV. *Professor Simpson*, in showing his BASILYST-TRACTOR (see Fig. 1.), observed that the instrument was calculated to accomplish any of the stages that might be found necessary in any case of head-reduction and extraction. In some cases perforation of the vault was required, and that alone. With the basilyst an opening could be made in the calvarium, round and smooth, like that produced by a trephine. This was effected by simply screwing in the point of the instrument as far as the shoulder, and then withdrawing it. Commonly, however, a more extensive gap would be required, and this could be secured by compressing the spring-handle of the instrument, and so separating the points as to bring about a wide dilaceration of the flat bones of the exposed part of the skull.

Where perforation of the vault did not give sufficient diminution in the bulk of the head, the basilyst gave, further, the safest and easiest method of securing the necessary comminution and collapse of the whole skull. For the point of it could now be carried into the cranial cavity and screwed into the hard, unyielding base. It had been suggested that the danger might be present at this stage of the operation of perforating not only the bones of the skull but the soft structures, and so reaching the internal surface of the uterus. Of course, such a danger could be imagined. But unless the point of the basilyst were directed to some point in the skull above the level of the ears—and no practitioner would be likely to make this mistake—such an accident could not possibly occur. Screwed in up to the shoulder, the point of the instrument could not go beyond the skin of the fœtus, and by compression of the handles, the hard bones of the face were torn apart.

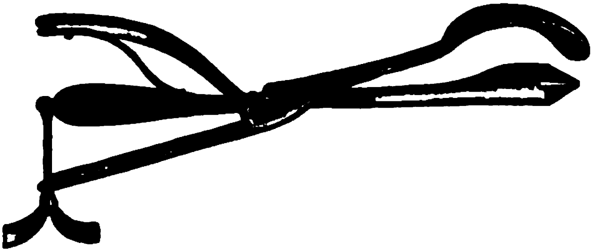

FIG. 1.

In experimenting recently with Dr Barbour on the head of a child that had become hardened to a considerable degree through lying long in spirit, he had found it difficult with the original basilyst to compress the handles with sufficient power to separate fully the points. In the new instrument the screw apparatus which was required for the traction-blade was made capable of adaptation to the spring-handle also. The power of the screw was thus made available for the dilaceration of the bones of the base, although he (Prof. Simpson) had never found difficulty in tearing up the bones of a recently dead fœtus by manual compression of the handles. In many cases such a dialysis of the basic bones as could be thus effected with the basilyst would allow of the easy transit of the now softened and mouldable head through a contracted pelvis. But the instrument which he now laid before the Society had the power of producing still further comminution of the head.

As the Fellows could see, the new instrument was provided with a blade resembling the external blade of an ordinary cranioclast. This could be applied outside the head, over the face or the occiput, or the sides of the head, according to circumstances, while the basilyst with its point fixed in the base served as the internal blade of a cranioclast. When the screw at the handle was fitted into the notch at the end of this new compression blade, a more thorough crushing of the bones of the skull could be secured than was possible with any cranioclast. If it were found necessary, after crushing the head in one direction, the external blade could be shifted and applied in the opposite direction, and so a compression produced equal to the compression of M. Tarnier's basiotribe.

Where further activity was indicated, and the operator found himself under the necessity of proceeding to the third stage of extraction of the head, the instrument with which he had effected the comminution gave him also the requisite power for traction and moulding of the head to the form of the pelvis. It was with the view primarily of thus fitting the basilyst for extraction that he (Prof. Simpson) had added this traction-blade to the instrument; and though it was no unimportant addition to the usefulness of the instrument that this blade increased its power as a comminutor, yet the chief value of it lay in its enduing the basilyst with the same power at once of securely grasping the head and of elongating and adapting it to the parturient passages which had made the cranioclast the favourite extractor.

The screwing apparatus was removable, and the tip of the wing of the screw-nut could be used as a screw-driver for taking out the pin of the joint. The instrument could thus be taken easily to pieces and thoroughly cleansed after every operation in which it had been employed.

V. *Dr Angus Macdonald* read a NOTE OF A CASE OF MEASLES DURING PREGNANCY, which appeared at page 699 of this Journal.

Professor Simpson had seen the case recorded by Sir James Simpson and referred to by Dr Macdonald, and could assure him that his suggestion that it was any other than a case of puerperal death from measles was utterly unwarranted. He remembered witnessing the autopsy made by Professor Turner in presence of a medical brother-in-law of the deceased lady, and the autopsy entirely confirmed the diagnosis that had been made during life; and when Sir James related the case to the Society, none of the Fellows present had any doubt as to its nature. The case had made a very deep impression on his (Prof. Simpson's) mind, and he retains the strongest opinion as to the risk a parturient woman may run who is exposed to an attack of measles. He quite admitted that the disease was not to be regarded as of equal gravity in all cases, and that it was not to be compared in its degree of danger with a puerperal scarlatina. The relation of puerperal patients to these zymotic diseases differed with the susceptibility of each individual patient. It could, perhaps, be most easily traced in the case of small-pox. During a small-pox epidemic pregnant and puerperal patients ran the risk of infection, less or greater, according as they had or had not been efficiently protected by vaccination or a previous attack of the disease; and when it seized on a patient unvaccinated on her first exposure to the poison about the date of her full-time delivery, the chances were she would succumb. The same thing held good with regard to measles, though here, of course, we have to do with a less fatal malady. Cases have been known of women being confined in the same bed with their scarlatinous children without fevering. But Sir James Simpson's patient had been an only child, carefully isolated through all her childhood, so that she had escaped exposure to measles until it came amongst her children, just when her thirteenth child was nearly due. And the value of the case lay in the demonstration it afforded of the danger this least fatal of the zymotics introduces into the lying-in room. For though the children all recovered easily, and even the new-born infant, the mother died the third day after labour. Dr Macdonald's case taught nothing, as it was not even certain that the patient had not previously had measles; and if he meant the profession to draw from his narrative the only logical conclusion, that stringent quarantine round pregnant and puerperal women was unnecessary in a measles epidemic, then he (Prof. Simpson) thought it would lead to practice that might be dangerous in a high degree.

Dr Wilson remarked that it was so far a fortunate circumstance that most women had had measles before they came to be pregnant, and that this might account for the rarity of its occurrence among women in this condition.

Dr Rattray had had much pleasure in listening to Dr Macdonald's paper. It reminded him of a patient, a lady, whom he met one day some years ago, and he observed at once the characteristic appearance of commencing measles. He advised her to go to bed at once, and in a short time she developed somewhat serious symptoms of bronchitis, but ultimately got well.

Dr Craig stated that measles accompanying the puerperal condition must be very rare, as out of a very large number of cases of midwifery he had not met with a single case of measles in childbed. This might be due in part to what had already been stated, that most women have had measles in infancy. He met with a case many years ago in which a woman was delivered in a bed in which were two of her children lying with the eruption of measles well out, but the mother did not take the disease. She was not sure if she had had measles in infancy. He also mentioned that during the last epidemic of smallpox in Edinburgh he was summoned to attend a gentleman suffering from smallpox, and as his wife was daily expecting her confinement, he at once vaccinated her. Both vesicles did well, and she was confined eight days afterwards, having nursed her husband till the day of her confinement. Of course she was confined in a separate bedroom, but in the same house. She made an excellent recovery, and did not take smallpox. Dr Craig vaccinated the child the morning after it was born, and the vaccination was successful. On the eighth day, however, smallpox manifested itself, and the child survived, not, however, without being considerably marked with the effects of the disease. The child was a female, and both breasts suppurated from the effects of the disease.

Dr Macdonald stated he was pleased with the remarks which had been called forth. He formed his opinion of Sir James Simpson's case by reading of it, and quite agrees at the same time with Professor Simpson's precautions as to quarantine. He was, however, convinced that the danger to a pregnant woman from exposure to infection of typhus, typhoid, etc., had been over estimated. Unless from concomitant complications these diseases were by no means necessarily fatal. They may go on well, and make an excellent recovery. What he meant most to bring out was simply that, while admitting such complications to be grave, they were not so grave as had been made out.

VI. *Dr Barbour* read a NOTE ON A CASE OF DIMINUTION OF ALBUMINURIA IN PREGNANCY COINCIDENT WITH THE DEATH OF THE FŒTUS, which appeared at page 701 of this Journal.

Dr Macdonald was delighted to listen to this case, and to Dr Barbour's valuable references to the literature. He would have been glad to have made a contribution to our knowledge had he met with an instance. He has no recollection of any such coincidence, unless the following one, which he saw with Dr Affleck. The patient at the eighth month had œdema and convulsions. He gave chloral, and all symptoms disappeared. He had some doubt as to whether the albumen disappeared entirely. The patient went on to full time, and delivery occurred without any complication.

VII. *The Secretary* read a paper on THE PREVENTION OF LYING-IN FEVER, by Dr Sutugin of St Petersburg, which appears at page 781 of this Journal.

On the motion of the President, the Society thanked the author for his contribution.

CARLISLE MEDICAL SOCIETY.

MEETING III.

Thursday, February 12, 1885.—DR LOCKIE, *Vice-President, in the Chair.*

Dr M'Laren showed a MAN, who had fractured his right patella 21 years ago, his left 18 years ago. Both had healed by fibrous union. The right fibrous union was 3 inches in length, the left 1 inch. He had free use of both limbs. The patient's father, brother, and sister had suffered from fracture of patella, in each case on the right side.

Dr Lediard showed a CASE OF AMPUTATION THROUGH THE KNEE-JOINT, in which the patella lay on the shaft of the femur, and not on the depression between the condyles.

Dr Macdonald showed a MAN with a scrotal swelling of 19 years standing of the nature of hydrocele.

Discussion on Dr Macphail's Paper on Pernicious Anæmia.

Dr Lediard said that some cases did not improve under arsenic. It might be that pernicious anæmia, like so many other diseases, had a germ at the bottom of it.

Dr M'Laren considered arsenic a valuable remedy for a condition otherwise incurable.

Dr Lockie had used arsenic in eight cases. In five of these improvement resulted. Of these five, four had relapses; and the fifth case is still under treatment. In only one case where there was a relapse did arsenic do any farther good.

Dr Spence pointed out the superiority of Malassez's hæmacytometer over Gowers'. He related a case of recovery, where both hæmacytes and hæmoglobin were reduced to 12 per cent.

Dr Douie alluded to the difficulty of diagnosis between pernicious anæmia and abdominal cancer.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

THE THERAPEUTIC APPLICATIONS OF CAFFEINE AND ITS PREPARATIONS.—For the past year Professor F. Riegel has been conducting experiments at his clinic with caffeine, and comes to the conclusion that caffeine is a heart remedy which deserves to be classed with digitalis, and in some cases is even preferable to it. He combines the caffeine with soda salts of benzoic, cinnamic, or salicylic acids. In healthy individuals the subcutaneous injection of from 7 to 15 grains produces a decisive slowing of the heart, with an increase in volume of the pulse; a reduction in blood-pressure was never noticed.

In the treatment of diseases caffeine was first given in cases in which digitalis was indicated, as in valvular disease where compensation was absent, and then in myocarditis, in fatty heart, in many cases of nephritis where there was reduction in the volume of urine, and, finally, in a case of pleurisy with effusion, where there was diminished diuresis and reduced blood-pressure, twenty-one cases in all.

In all of these cases favourable results were noticed, and led to the formation of the following conclusions:—

1. Caffeine is a heart regulating drug, with the same mode of action as digitalis.
2. In suitable doses it increases the power of the heart, slows the pulse, and increases arterial blood-pressure.
3. It produces a rapid increase in the excretion of urine.
4. The indications for its use are the same as those which govern the use of digitalis.
5. Caffeine is most efficacious in frequently repeated small doses.
6. Its action differs from that of digitalis in that it is much more rapid and entirely free from the cumulative action which often complicates the results of digitalis.
7. Even in cases in which digitalis has proved of no service, caffeine is nevertheless indicated, and its employment will often be accompanied by favourable results.
8. The simultaneous use of narcotics, especially morphia, with caffeine is not to be recommended.
9. Caffeine, especially the easily soluble double salts above mentioned, is better borne than digitalis.

Dr C. Becher (*Wien. Med. Bl.*, vii. 21, 1884) is led by his investigations to conclusions similar to those of Riegel. He employed the citrate of caffeine, the hydrobromate, and in some cases pure caffeine, in cases of heart disease; in eight cases of pleurisy, with effusion; and in four cases of nephritis. The single doses employed were from three to seven and one-half grains of the citrate or hydrobromate, while as much as ten to twenty or even thirty grains were given in twenty-four hours. Pure caffeine was given in much smaller quantity, one and one-half to three grains representing single doses, and six to ten grains the amount given in twenty-four hours.

In the majority of the 34 cases observed by Becher, caffeine produced an increase in the power of the heart's contractions, a higher pulse wave and increased tension of the peripheral arteries. The reduction in the rate of the pulse produced by caffeine is, according to Becher, not as marked as that due to the action of digitalis, though the reduction may amount to ten or twenty beats in the minute. On the other hand, under the use of caffeine in sixteen cases, the amount of urine increased from one and one-half to three times its normal quantity. Pure caffeine is not as well adapted for use as the different salts, as in three cases it refused to be tolerated on the second day of its administration. The unfavourable symptoms produced by caffeine are of very rare occurrence. They may be headache, giddiness, and vomiting.—*Schmidt's Jahrbücher*, 21st Oct. 1884.

The two following formulæ are proposed by M. Tauret (*Jour. de Méd. de Paris*, 1st Nov. 1884), for making a stable preparation of caffeine, with benzoate or salicylate of soda. The first contains 48·8 per cent. of caffeine, and the second 61 per cent.:—

℞ Benzoate of sodium, gr. xlvii.
Caffeine, . . gr. xl.
Distilled water, . ℥iss.

Sixteen drops of this solution contain about four grains caffeine.

℞ Salicylate of sodium, gr. xlviii.
Caffeine, . . gr. xli.
Distilled water, . ℥iss.

Dissolve with the aid of heat. Sixteen drops contain about seven grains of caffeine.—*Therapeutic Gazette*, 15th January 1885.

PHENIC ACID IN YELLOW FEVER.—Dr de Lacaille, of Rio de Janeiro, professes to have cured 38 consecutive cases of yellow fever by the use of Déclat's preparations of *phenic* and *sulpho-phenic acids*, and in grave cases the *phenate of ammonium*. In the early stages he gives the remedies by the mouth, but in the advanced stages the hypodermic method is necessary. He contrasts very favourably his recent experience with his former sad failures without these drugs (*Med. and Surg. Reporter*).—*The Quarterly Therapeutic Review*, January 1885.

PICROTOXIN IN NIGHT SWEATS.—Dr Cauldwell (*New York Med. Journal*) tried for the relief of phthisical night sweats, atropine, ergotine, digitalis, aconite, paraceto bark, salicine, and oxide of zinc; each had some unsatisfactory feature. *Picrotoxin* was found to be by far the best of all such remedies. Dr Cauldwell found the dose recommended by Ringer and Murrell, $\frac{1}{100}$ grain, too small, and increased the dose to $\frac{1}{40}$–$\frac{1}{30}$ in one dose at bedtime, to be repeated at midnight if necessary. Success was invariable, and there was no disagreeable results (*St Louis Med. and Surg. Journal*).—*Quarterly Therapeutic Review*, July 1885.

PILOCARPINE.—As regards the therapeutic applications of pilocarpine M. Lavrand believes that if used at the very commencement it may prove useful, through producing sweating, in nearly all diseases resulting from exposure to cold (angina, laryngitis, bronchitis, influenza, pleuro-pneumonia). In asthma and in attacks of dyspnœa in emphysema, although it acts less rapidly than morphia as a sedative, it gives relief by stimulating bronchial secretion. In diphtheria it has proved of service, though no claims for its specific virtues can be sustained; it should be used as an adjuvant to other treatment, and great care be taken against the production of collapse. Pilocarpine seems frequently to arrest acute pleurisy if given at the onset of the disease, and even old effusions will not unfrequently disappear under its use. In ophthalmology it deserves a place as a myotic alongside of eserine; its characteristic effects are produced whether administered subcutaneously or by instillation. In acute nephritis, under the influence of pilocarpine the symptoms rapidly improve, and in the majority of cases a prompt cure results. Pilocarpine is also a valuable remedy in all forms of uræmic accidents, whether puerperal or resulting from scarlatina. Chronic parenchymatous nephritis in all stages is frequently ameliorated by pilocarpine, even when uræmia is present, but the more recent the case, the stronger may be the hope of doing good.

In chronic interstitial nephritis it is equally useful, though in this case advanced cardiac lesions form an absolute contraindication.—*Therapeutic Gazette*, 15th January 1885.

EPILOBIUM ANGUSTIFOLIUM.—Dr A. Patton, New Orleans, strongly recommends this plant in chronic dysentery, diarrhœa, and ulceration of the bowels. He tried it on himself with marked benefit, and adds, "I have treated a number of very obstinate cases with this medicine, and always with marked success. The preparation employed was either the fluid extract or a decoction of the herb. I have found by experience that the dried herb is almost inert. If the fluid extract is made from the green herb, it is nearly a specific in the disease mentioned." "The dose of the fluid extract is one to two drachms."—*Therapeutic Gazette*, December 1884.

This plant is not uncommon in rocky places in Scotland, and when introduced into gardens becomes a troublesome weed. It has showy red flowers, and is popularly known as the "garden willow."

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D., and WILLIAM RUSSELL, M.D.

THE TREATMENT OF HYPERPYREXIA BY COLD APPLICATIONS TO THE ABDOMEN, AND OF ERYSIPELAS BY JABORANDI.—Dr Da Costa, of Jefferson Medical College, in a clinical lecture gives the details of a case of typhoid fever with a persistent temperature of from 104° to 104°·8 and marked general depression, which was successfully treated by the application of cloths wrung out of ice water and applied over the abdomen. These at once reduced the temperature to 100°. Large doses of quinine (from 16 to 20 grains daily) with free stimulation had failed to produce any effect on the temperature. Dr Da Costa concludes that quinine should only be given in tonic doses, and that iced applications to the abdomen are preferable to and more easily managed than baths. He also details a case of erysipelas of the face, the result of a blow in the eye, accompanied with laceration, which was cut short by the sixth of a grain of the muriate of pilocarpine administered hypodermically. Profuse sweating was produced, and the temperature fell from 102° to 99°·5. He advocates its further trial.—*Philadelphia Medical Times*, 29th Nov. 1884.

THE CAUSATION AND TREATMENT OF TABES DORSALIS, PARTICULARLY WITH REGARD TO ITS CONNECTION WITH SYPHILIS.—During the four and a half years between 1st January 1880 and 1st July 1884, Eulenburg has observed 125 cases of ataxy, 106 of which were men and 19 women; the relative proportion, therefore, is nearly 6 to 1. This corresponds very closely with the ratio given in his work on "Nervous Diseases," where we find that of 149, 128 were men and 21 women, so that of the total number (274 cases), 234 were of the male and 40 of the female sex. Comparing the two sets of statistics, we find that the onset of the disease occurred at the following ages:—

	Whole Series.	Present Series.
Below 20 years of age	3	—
„ 30 „	71	24
„ 40 „	99	53
„ 50 „	85	37
„ 60 „	16	11
Above 60 „	—	—
	274	125

It appears most frequently, therefore, between the 30th and 40th years of life, less frequently from 40–50 and 20–30, much less frequently above 50 and below 20, and never above 60. Putting aside the 19 cases of the disease in women, Eulenburg found that of the 106 instances in men, 67 never had any previous taint of syphilis, while 39 had. Of these 39, only 28 gave undeniable evidence of having had an indurated sore and constitutional effects, the other 11 having probably had a soft sore without constitutional disturbance. Of the 19 women affected with tabes, only one had undoubtedly previously had syphilis, although in one or two other cases there was a suspicion of its existence. Among other causes heredity plays a part, 15 of the 125 cases having an inherited tendency to nervous diseases, although there was only one case of direct inheritance of tabes from parent to child, and another in which two members of the same family suffered from tabes. Atmospheric agencies were put down as the cause in 48 cases; severe bodily strains in 15 cases as the sole cause, and, along with exposure, in 11 cases; continuous work at the sewing-machine or turning-lathe in 2 cases, one of which had previously had syphilis; mental affections (either as sole cause or as an additional cause) in 16; traumatism in 6 cases; deformity of the spinal column in 4 cases; and acute diseases (enteric fever four times, and dysentery once) in 5 cases; while conditions of debility and exhaustion were blamed as the only or associated cause in 13 cases. From his study of the series of cases, Eulenburg concludes:—1. That a tolerably large percentage of tabes cases have previously had syphilis. 2. That the connexion between the two diseases is of an uncertain nature, syphilis acting probably in most cases only as a weakening and predisposing agent, but perhaps in a certain proportion of cases as a direct cause. 3. That syphilis is not the only, perhaps not the commonest or most important cause of tabes. 4. That syphilitic cases of tabes have no characteristic symptoms which can separate them from non-syphilitic cases. 5. That as regards prognosis and therapeutics there is no important distinction, for syphilitic cases are often improved by non-specific treatment after special treatment has failed, or been of little use. 6. That since the question of the relation of syphilis and tabes has been brought forward, the etiology and pathogeny of tabes have been considerably advanced, but not solved, while the practical question of treatment has gained.—*Archiv für pathologische Anatomie und Physiologie und für klinische Medicin*, 2nd January 1885.

CHRONIC BRONCHITIS IN CHILDREN.—This may be a legacy left by measles or whooping-cough, but it may also appear as a primary affection, and then its onset is insidious. It is attended with little constitutional disturbance, no elevation of temperature, and no disturbance of the ordinary bodily functions. Only the cough is frequent, often spasmodic and deep, and accompanied by expectoration if the child be old enough. Respirations do not appear notably increased. The child becomes, however, pale and emaciated. The physical signs are those of bronchitis; there is no diminution of resonance at the apices or bases of the lungs; there are sibilant and sonorous rhonchi, and subcrepitant dry or moist râles scattered universally over the lungs, the latter being most numerous at the bases, and sometimes confined to them. As improvement occurs the râles become limited to one side or to one base. The condition is much affected by climatic changes, being worst in cold wet weather. Tubercle is liable to develop, the bronchitic condition offering a ready soil for the evolution of the tubercular poison. The affection occurs in children of a lymphatic or scrofulous constitution. The treatment employed is ipecacuan in emetic doses once or twice a week. If the cough is troublesome, or prevents sleep, belladonna is administered, while for the constitutional condition cod-liver oil is given. A number of cases are detailed, and the foregoing method of treatment appears to have been highly satisfactory (Dr J. Cornby).—*Le Progrès Médicale*, 13th and 20th Dec. 1884.

SOME MODERN METHODS OF TREATING PULMONARY PHTHISIS.—Dr Beverley Robinson, of Bellevue Hospital Medical School, in a clinical lecture discusses the treatment of pulmonary phthisis under three heads:—*First*, Super-alimentation. Under this head he advocates the administration of a pint of milk, three raw eggs, and an ounce of Reed and Carnick's beef peptonoids, by means of a soft œsophageal tube passed into the stomach, and repeated twice or thrice daily. As there is abundant evidence of malnutrition and wasting, the first indication is that sufficient food should be given to neutralize all waste or inanition. This treatment, continued for months without interruption has been known to permanently cure many cases of advanced phthisis. In addition, the ordinary medical remedies can be administered. *Second*, Besides super-alimentation the utility of using the inhalation of the dry vapours of creasote, iodine, carbolic acid, turpentine, eucalyptus, and benzoin is maintained. These may not of themselves effect reparative changes, but they lessen the frequency and the intensity of the cough, as well as deodorize and diminish the quantity of the sputa. The inhaler known in this country as Burney Yeo's is the one preferred. *Third*, Intra-pulmonary injections. By this is meant the injection into the diseased portion of lung, usually selecting the second space in the mammary line, by puncture through the chest wall, passing the needle to the depth of 1½ inches. The injection employed is ten minims of dilute Lugol's solution. The effect of this is to lessen the cough, diminish the sputa, and relieve the breathing. It causes little pain, and seldom gives rise to any hæmorrhage. Dr Robinson has performed about twenty intra-pulmonary injections, and Dr Pepper of the University of Pennsylvania over two hundred, without any disastrous results. It is expected that these injections will disinfect the contents of lung cavities, modify and diminish the secretion from their walls, and tend to cicatrization and contraction of the cavities.—*Philadelphia Medical Times*, 15th Nov. 1884.

A NEW AID IN THE DIAGNOSIS OF RENAL DISEASE.—Dr Julius Wolff, in the *Deutsche Med. Wochenschrift* for 25th Sept. 1884, has called attention to a new aid in the detection of renal disease. He observed that with the iodide of potassium there was a direct reversal in the quantity of the salt separated by the salivary glands and the kidneys. When a healthy person takes three grains of the iodide, sixteen hours later a much larger quantity will be secreted by the kidneys than by the salivary glands. This can be proved by adding a drop of fuming nitric acid to starch paper saturated with urine, when the paper will be found much more vividly blue than starch paper saturated with saliva, and similarly treated. In renal disease the reverse occurs, more iodine being excreted by the salivary glands than the kidneys. Sometimes none at all is eliminated by the latter organs. The period for which the excretion is maintained is prolonged. In health, after taking three grains of the iodide, it continues to appear in the urine and saliva for from half a day to one and a half, while in renal disease it may continue in the saliva for seven and a half days. This reversal of the natural order of iodine excretion occurs in acute and chronic parenchymatous nephritis, in amyloid degeneration, hæmorrhagic nephritis, renal tumours, and in contracting kidney. This symptom proceeds *pari passu* with the albuminuria, and from it the amount of albumen discharged may be inferred. Where albuminuria is wanting, as in some cases of contracting kidney, the defective iodine excretion remains. Very rarely cases occur in which this arrest of iodine excretion is absent. Pus in the urine from cystitis or pyelitis does not interfere with the exhibition of this symptom. It is possible that the iodine may unite with the renal epithelium, and be again re-absorbed and secreted with the saliva, or it may not be taken up at all by the epithelium. The former might occur where a small amount of iodine appears in the urine, the latter where none is present. The starch papers should be protected from the vapours of iodine, and protected from the atmosphere. The saliva should not be tested immediately after a meal. The above may explain the fact that iodide of potassium is of no use in the treatment of contracting kidney, as might be expected.—*Philadelphia Medical News*, 15th Nov. 1884.

PERFORATING ULCER OF THE FOOT IN DIABETES.—Kirmisson gives notes of three cases in which these conditions were associated, and which were under his personal observation, and supplements them by three cases from other sources. He contends that trophic lesions are not uncommon in diabetes, and that the perforating ulcer is to be included amongst these. The ulcer is preceded by circumscribed anæsthesia of the part, and after its formation it is surrounded by an anæsthetic zone, or one in which sensibility is notably diminished.—*Archives Gén. de Méd.*, January 1885.

MEDICAL PERISCOPE.

By Francis Troup, M.D.

QUOAD NAPHTHALINUM.—In the February number of this journal, page 756, attention was drawn to Rossbach's recommendation of naphthaline in various diseases. Caution seems to be necessary in its free use, as in a case of bladder trouble complicating a spinal curvature in the Longmore Hospital here, doses of 1 gramme daily, after a few days, brought about great frequency of micturition and pain and tenesmus in doing so. No albumen was to be found in the urine. Several German observers have noticed the same effects, although in the preparation of the drug from the commercial variety Rossbach's directions were implicitly followed, and the specimens were thus perfectly pure.

TREATMENT OF ILEUS BY STOMACH-WASHING.—The same page of the same journal refers to several cases of ileus treated successfully by washing, and in No. 5 *Berlin. Klin. Wochenschrift*, 1885, Prof. Senator returns to the subject, and narrates five cases similarly treated, curative in some, palliative in all. Its palliative operation, by which certain extremely tormenting and disquieting symptoms, such as hiccup and fæcal vomiting, are entirely removed, happens in a much more rational way than is possible by the administration of opium, ice, etc. The vomiting can only be quietened by such means in a temporary manner, and not to the benefit of the patient, for they do not remove the offending material, but only allay the irritability of the nerves presiding over the act of vomiting. Meantime the materials are accumulating and vomiting must come. Washing, on the other hand, puts aside one cause of the vomiting—the repletion of the stomach and upper divisions of the bowel, for in such cases there exists an insufficiency of the pylorus, and thus not merely the stomach but also the bowel is partly emptied. This must bring about a wonderful alteration in the pressure of the fluid columns in the several segments of the bowel. By the emptying of the sections of bowel above the obstacle, the pressure of the fluid columns below it preponderates, and retroperistalsis of some violence will set in, and so cause the impediment to give way.

NITRO-GLYCERINE IN CONTRACTED KIDNEY (*Ibid.*, No. 3, 1885).—Prof. Rossbach does not believe that increased urinary secretion in contracted kidney depends merely on increased blood-pressure and quicker passage of the blood through the sound portions of the kidney. If one give nitro-glycerine internally to men with chronic renal maladies—particularly contracted kidneys—the blood-pressure either becomes normal or sub-normal; nevertheless the quantity of urine passed may even increase instead of diminishing, the patient's feeling of well-being improves, and severe symptoms connected with eyes and chest undergo great amelioration. Cases are related, such as the following:—A forester, æt. 22, Herculean build, and all the symptoms of contracted kidney, extraordinarily tense pulse, and retinitis albuminurica, passed, before administration of nitro-glycerine—

Urine per day.	Albumen per day.	Albumen per cent.
CC.	Gram.	
4188	14·812	0·354
3980	11·132	0·280
4356	11·542	0·263
4530	13·139	0·290
4730	13·130	0·277
5355	15·347	0·287
4435	13·058	0·294

After the use of nitro-glycerine in doses of 0·0012 every third hour,

Urine per day.	Albumen per day.	Albumen per cent.
CC.	Gram.	
4908	13·591	0·277
4985	11·865	0·238
4810	11·146	0·232
5115	13·255	0·259

Urine improved so much and patient felt so well that he would not remain in hospital. Fourteen days afterwards an apoplectic attack killed him while travelling on a railway. Such observations show that a lowering of the blood-pressure has only good results. Quantity of urine increases, albumen diminishes, uræmic asthma disappears, and retinitis ameliorates. It is therefore plain—(1.) That the increased urinary secretion depends on other factors than high blood-pressure, perhaps a better permeability of the remaining capillary walls for blood-fluids. In quite another way R. Thoma has shown that this permeability of bloodvessels is so extraordinarily increased in interstitial chronic nephritis, that not only dissolved crystalloid and colloid bodies, but even fine particles of cinnabar, pass, without rupture, from the coils of the glomeruli into the capsules, and out of the capillaries into the connective tissue. (2.) That high blood-pressure has a causal connexion with the accompanying retinitis, asthma, etc. (3.) That nitro-glycerine is an excellent means to preserve life and combat the severe symptoms of this disease. Comparative experiments with sodium and potassium and amyl nitrites proved nitro-glycerine to have far fewer disagreeable effects and drawbacks. After a few days the patient feels so much better that he thinks himself quite well. The dose is half to one milligramme (about 1-120th to 1-60th of a grain) ten to fifteen times daily in hourly intervals. It is best prepared as follows:—A weighed quantity of nitro-glycerine is dissolved in ether and thoroughly mixed with two parts of chocolate powder and one part of gum arabic. For every decigramme of nitro-glycerine 200 grammes of the mixture are taken. After the ether has evaporated the powder is stirred with water to a pappy consistence, poured into moulds, and before it has set, divided into tablets containing the desired dose.

ABORTIVE TREATMENT OF TYPHOID FEVER BY MERCURIAL INUNCTIONS.—Dr Kalb, Thalmässing, *Ibid.* No. 3, 1885, has treated 100 cases in this way. The mercury is no new medicament—it is only applied in a new way in this fever. Six grammes of the ointment (in children 4) are rubbed in for half an hour each time daily for six times in all—1st, on the belly; 2nd, on the inner side of the right thigh; 3rd, the left, and then beginning with the abdomen again. The ointment is preferable when a little rancid; it causes less eczema than when fresh. Internally at first a few pills of calomel and opium are given, even when diarrhœa is present. No other medication is resorted to save methodical use of alcohol (sp. oryzæ), coloured with cochineal. The course of the disease under this treatment was mostly as follows:—On the eighth day, consequently on the second after the inunctions ended, the temperature fell to normal or thereabout, and remained so. The pulse remains for a few days over 100 or 120, yet it falls with the temperature to normal, or even 60. With the fall of temperature an abundant sweating almost always sets in, and body is covered

with miliary vesicles. The spleen remains enlarged and palpable for ten to fourteen days after this. Dr Kalb did not fail to make comparative experiments, and found that the inunction treatment caused an evident shortening of the course of the disease. Eighty per cent. of his cases so treated were free of fever in ten days from its beginning. But to be successful, treatment must be begun before the ninth day of the fever, consequently before the rose-spots are visible. No stomatitis worth mentioning has ever resulted, and patients recovering so soon must be carefully watched for a fortnight and dietetic errors avoided, so that relapses may be prevented. The charts adhibited show the cases to have been of some severity, as temperatures of 40° and 41° C. = 104° to 105°·8, are registered.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Unilateral Chromidrosis.—Dr James C. White first points out that some cases of apparent chromidrosis have been shown to be due to discoloration of the skin from the growth of bacteria in the hairs of parts thus affected. These occur chiefly in localities kept constantly moist by abundant perspiration, as in the axillary and genital regions, although the presence of the sweat may be an essential condition. References to the excretion of yellow sweat are amongst the least common in literature. The case reported by Dr White was that of a German, aged 20; healthy; employed in a sugar factory. For six months he had noticed that the left side of his shirt was constantly stained of a yellow colour, and that the ordinary process of laundry washing did not wholly remove this, so that it became more and more deeply tinted. An entirely new shirt, which had been put on a week before he was examined, was stained of a bright saffron colour on the left side from the shoulder down to the end of the flap. The stained portion had a somewhat translucent greasy look. The skin on the same side presented no abnormal appearances, and was of a natural colour, nor did it, the patient stated, ever become more yellow than other parts of the surface. Though not more careful as to ablution than others of his class, no amount of extra washing with soap seemed to control it, even temporarily. He was kept under observation for two weeks without treatment, and the clothing continued to be stained as before. He was then directed to apply an ointment of salicylic and boracic acids to the parts affected, and the complaint disappeared in course of ten days, and did not recur. The shirt was examined by Dr Ernst for bacteria, but none were found. Professor Wood ascertained that the yellow colouring matter was insoluble in water, but could be extracted by ether. The yellow colour was not due to lutein, the pigment of serum, and yolk of egg. With the spectroscope it did not give the characteristic absorption bands of any of the known animal pigments, or of the colouring principles of the urine. On evaporating the ethereal solution, a homogeneous, oily fluid remained, from which the yellow colour could not be extracted. Dr White thinks it was produced from the sweat glands, but the cause of its unilateral distribution is unexplained.—*Journal of Cutaneous and Venereal Diseases*, October 1884.

ARSENICAL DERMATITIS.—Dr White relates three cases of arsenical dermatitis presenting peculiar symptoms. The first occurred in a medical student, the palmar surfaces of whose hands were universally occupied by vesicles buried deeply beneath the thick horny layer, closely approximated, and presenting the boiled sago-like appearance considered to be characteristic of the so-called dysidrosis. There was general thickening of the integument, with much burning and itching. All these manifestations of an acute dermatitis reached their height of development in three or four days, and subsided in the course of the following week, leaving a somewhat prolonged desquamation of the palms. Investigation elicited that the patient had been using, a few evenings before the onset of the inflammation, a pack of playing cards, the backs of which were covered with a large amount of arsenical green. In the second case, a man, who had been in hospital for five weeks for anæmia and general debility, had been discharged, and twelve days after, when seen, had been at work for a week, engaged in fastening pieces of white webbing into sample books, the paper linings of which were ascertained to be covered with green arsenical pigment. His mouth had been sore for two days, and red spots had appeared on his hands and arms. When seen there was swelling of the hands in addition, also of the face, so as nearly to close the eyes, and its colour was very red. The ears also were œdematous and swollen, and discharged serum, while the neck, as far as it was visible, was inflamed. Vesiculation and free oozing supervened, and the hair fell off in quantity, while the swelling of all the parts increased. The temperature rose one day to 102°·5 F., and the dermatitis did not subside sufficiently to prevent of his being regarded as pretty well for three weeks. In the third case the symptoms more resembled what has been described as pityriasis maculata et circinata, and affected a lady a few weeks after her confinement and her baby. In both the disease disappeared on removal from the room, which was found to have had its walls covered with a paper, the colouring matter of which was easily detached, and contained arsenic. Dr White suggests that this possible mode of production of the rare disease named pityriasis maculata et circinata should be further inquired into.—*Boston Medical and Surgical Journal*, 6th November 1884.

RESORCIN IN SKIN DISEASES.—Cattani supports the observations of Andeer as to the beneficial effect of resorcin in erysipelas. He has had some success in a case of epithelioma, and finds it healing in bedsores. "It may be permitted to conclude that resorcin influences the nutrition of the textures of the skin, especially the epithelial tissues, even when one has to deal with a heteromorphic formation of epithelium. It acts particularly in a destructive manner in this, and subsequently regulates the gradual development of the normal epithelial covering."—*Monatshefte für praktische Dermatologie*, Nos. 9 and 10, 1884.

SUPPURATIVE PERIFOLLICULITIS CONGLOMERATED EN PLACARDS.—This is the name given by Leloir to a disease observed by him in six persons. It is characterized by a projection of the skin, rounded or slightly oval, raised two to five millimetres above the normal level of the integument, varying in dimensions from a ten cent. piece to that of a silver dollar, or larger. This protuberance is most often covered with pus and small crusts. When it is cleaned the surface is smooth or slightly irregular, riddled with a large number of small orifices of pinhead size, the most of these being obstructed by a small yellowish plug of concrete pus. If the surface is compressed either pus or a serous fluid, or a large number of minutely elongated rolls resembling fine vermicelli, escape. A silver probe introduced into one of these conduits will penetrate several millimetres, but there is no detachment of the derma. The hairs so far as observed were healthy, but the affection develops in regions where there are merely downy hairs, which soon fall. There is scarcely any itching, and no secondary lymphangitis. It develops with rapidity, requiring about a week to arrive at maturity. It remains at its height from eight to fifteen days, then when properly treated it gradually disappears in about twelve days without leaving very appreciable cicatrices. Sometimes there persists for a long time a livid, violaceous, or biskre tint of the skin. A papillomatous aspect assumed suggested a parasitic sycosis, but this was not confirmed. Histologically, it was proved to be nothing more than a perifolliculitis capable of becoming profound and phlegmonous. The affection was observed four times on the backs of the hands, once on the dorsal surface of the foot, once disseminated over various regions of the body. Micrococci were found in all the diseased parts.—*Annales de Dermatologie et de Syphiligraphie*, Sept. 1884.

TREATMENT OF ACNE AND ACNE ROSACEA.—Sherwell believes that these morbid states of the skin, either alone or when combined, depend in almost every instance on conditions reflected from the sexual or digestive apparatus. He thinks that nine cases out of ten of tubercular acne and rosacea are caused by congestion, probably passive, of some of the viscera related to these functions, though why these should be reflected in the face he expresses no opinion. His recommendation is that in persistent cases of acne and rosacea in the male subject the use of the cold urethral sound should be resorted to, and that too with some degree of diligence. He mentions two cases where this succeeded after the failure of other measures.—*Journal of Cutaneous and Venereal Diseases*, November 1884.

CUTANEOUS HORNS.—Bergh of Copenhagen, after narrating three cases, adds—"According to Lebert such horns give rise in 12 per cent. of cases to consecutive epithelioma. Occasionally the epithelioma is the primitive affection on which the horns develop themselves later. On account of their affinity to cancer, it is best to extirpate the horns as soon as possible, and to remove the whole skin which forms their foundation."—*Hospitals-Tidende*, 1884, No. 32, vol. ii.

URTICARIA PIGMENTOSA.—Dr Colcott Fox has collected all the published cases of this curious disease, and summarized them. Nineteen cases have so far been recorded; of these fourteen were boys, four girls, and in one the sex was not noted. The eruption was noticed in the first six months of life. It commences either as urticaria with special wheal-like lesions, or at least it has a marked urticarial element in it. The hyperæmia is more lasting than in an ordinary urticarial wheal, so that the lesions remain for a long time incompletely subsided. Whilst in this condition the urticarial state is easily lighted up again by rubbing the spot, and probably by emotional disturbance. In more severe cases firmish nodules form, corrugated or granular, on their surface. Dr Morrow found that these remained stationary for from one to three weeks, and then subsided into pigmentary macules. In both these phases there is found a yellowish or brownish pigmentation, removable by pressure, due chiefly to a special tendency to the deposit of pigment in the site—in fact, to the breaking up of escaped red blood corpuscles. The persistence of the staining is greater than after the disappearance of lichen planus or a syphilide. In shape this efflorescence is primarily round. Generally it is evolved with much itching or continues irritable. Occasionally this is not a marked feature; it is less noticeable after a time. The trunk is early affected, then the limbs. It reaches its climax of intensity in infancy or early childhood, and after a variable period the fresh spots and the urticarial element become less apparent. The complete disappearance of all the stains has not yet been observed in any case. It is not hereditary nor associated with any taint, and the only point of importance is the excessive sensitiveness of the cutaneous vaso-motor apparatus. A section of one nodule, made urticarial by rubbing, showed the formation of a typical wheal. The epidermis was thinned by stretching, with a great excess of tawny pigment in its lowest layers. The tissue of the upper part of the corium was rarified to the last degree, containing cell elements in the meshes.—*Medico-Chirurgical Transactions*, vol. lxvi.

Pruritus Ani and the distressing itching of urticaria and mosquito bites can be much alleviated by local applications of menthol. It may be used by rubbing the menthol pencil lightly over the surface, or by dissolving a small amount in alcohol and wetting the part.—*Polyclinic and Dublin Medical Journal*, Jan. 1885.

PERISCOPE OF SYPHILOLOGY.

By Francis Cadell, F.R.C.S. Ed.

Dosage of Potassium Iodide, by E. C. Seguin, M.D.—After quoting works on materia medica and practice of physic to show how inadequate are the doses of iodide of potassium recommended in these works to combat the later lesions of syphilis, he gives credit to Dr Thomas Buzzard as the only European writer of note who has appreciated the advantage of giving large doses. Ordinary large doses are described as 120 to 150 grains a day. This amount may be increased as required to the limit of the patient's endurance. In a case of extremely acute syphilitic cranial pain, whether strictly neuralgic, or from nodes, or from a deeply placed lesion, the author believes that the successful and also safe practice is to begin by doses of 60 grains, twice the first day, three times the second, and so on. This would give on the seventh day ℥j. of K I. In a case of cerebral syphilis, in coma, or that peculiar stupor so suggestive of syphilis, his practice is to give 60 grains every three or four hours, doubling the dose the next day. He finds that by giving the iodide on an empty stomach, half an hour before meals, iodism is very rare, and gastro-intestinal irritation almost unknown.

On Syphilitic Sequelæ (Tertiary Syphilis) resulting from Syphilis acquired in Utero.—In the *Philadelphia Medical Times*, 1st Nov. 1884, there is a clinical lecture on this subject by Dr F. N. Otis. He notices in the case of a boy, eighteen years of age, who is not larger than most boys of five, that the bones of the nose have been carried away; there has been loss of bony material of the forehead, and general disfigurement of the head and body. The effect of the disease has been to stunt, retard the growth in every respect. The chief interest in the case is the history of the acquirement of the disease in utero, and its illustration of the fact that when so acquired it develops exactly in the same way as when occurring in the adult. What Dr Otis wishes to demonstrate by this case is, that the lesions are not the effect of a vitiated *hereditary diathesis*, but, as far as a single case can go, it gives support to the view he has long held, that syphilis in the infant, in the embryo, or the ovum, is the result of direct contact of its germinal cells with the contagium of syphilis through the blood of the mother. The claim often made that syphilis is or may be communicated to the embryo through the influence of the male parent directly is disproved by the fact, demonstrated by the experiments of Mireur and others, now accepted by all recent authorities, that the semen does not contain the contagious property of syphilis. Syphilis must, then, first be communicated to the mother before it can reach her unborn child. If, then, as has been shown, the semen does not contain the contagium of syphilis, the male parent cannot transmit it directly to his offspring. The mother must first acquire the disease; and it is only through the disease-germs of syphilis circulating in her organism that the product of conception can be infected before birth.

Ten Cases of Extra-genital Chancre.—Dr A. Van Harlingen (*Philadelphia Medical Times*, 1st Nov. 1884) describes six cases occurring on the lips, generally from amatory bites, one on the tongue, one on the face, contracted in a shaving shop, a mammary chancre caused by a bite from the woman's lover, and one on the eyelid through the sucking of a punctured contusion by a syphilitic person.

SURGICAL PERISCOPE.

By A. G. Miller, M.D., F.R.C.S.E.

New Treatment of Strangulated Hæmorrhoids.—Dr Monod advises a new treatment for strangulated hæmorrhoids, which he has practised with great success. It consists in forcibly dilating the anus, as in cases of fissure. Verneuil had already recommended this method for the cure of simple piles, and has been followed by most of the young surgeons, who have entirely abandoned every other treatment. To effect the dilatation Verneuil employed specula of different dimensions, and only in the case, as has been just stated, of the ordinary condition of hæmorrhoids. On the contrary, he says that "when the piles are the seat of sphacelus he always waited until the complication disappeared." Monod, who has imitated Verneuil with the best results in those simple cases, goes still farther, and instead of regarding strangulation as a counter-indication to the operation, considers that this fact renders it the more necessary. He cites a case in point. He was called by one of his *confrères* to see a gentleman who had been suffering excruciating agony for two days from strangulated piles, and on whom ice fomentations, narcotics *intus* and *extra*, were tried without effect. Local examination showed no more than is ordinary in such cases —a ring of tumefied external hæmorrhoids surrounding a packet of internal turgescent hæmorrhoids, with a dark spot in the centre, announcing the commencement of sphacelus. The least touch was painful, and the patient demanded relief at any price. Partisan of the treatment of hæmorrhoids in general by dilatation, he thought that he would be doing right in employing it in the present case, knowing that by suppressing the action of the sphincter the pain would cease. Accordingly, the patient was put under the influence of chloroform, and the hæmorrhoidal tumours reduced, and then Monod largely dilated the anus with his fingers. A few minutes afterward the patient awoke free from all pain, and in a few days he had the satisfaction of not only feeling that the strangulation had entirely disappeared, but that he was for ever quit of his piles. This case of Monod's proves that the hand dilates just as well as the speculum, and consequently the operation is reduced to its simplest expression.—*Medical Record*, 29th Nov. 1884.

TUBERCULOUS JOINT DISEASE AND GENERAL TUBERCULOSIS.—The *New York Medical Journal* for 27th Dec. 1884 publishes a paper by Dr Frederick S. Dennis on the above subject. The paper was read before the New York Medical Association, where Dr Dennis showed tubercle bacilli found in a strumous wrist-joint. His paper concluded with the following deductions:—*1st*, Scrofulous abscesses are dangerous, because in them *Bacilli tuberculosis* may develop, and from these abscesses, as infective foci, general dissemination may proceed in the form of acute miliary tuberculosis. *2nd*, That tuberculous joint disease can produce general infection, or acute miliary tuberculosis. *3rd*, That traumatism may act as one of the many exciting causes to develop tuberculous joint disease, provided the conditions are favourable. *4th*, That traumatism alone will not develop tuberculous joint disease except where certain conditions are present.

THE MECHANISM OF ROTATION OF THE FOREARM.—Heiberg is of the opinion that in rotation of the hand, the radius does not simply turn around the ulna, but that both radius and ulna rotate around an axis lying between the two. Dr v. Meyer agrees with Heiberg that this may occur in certain cases, but regards it as occurring only exceptionally, and in cases in which the ligaments of the elbow are stretched to a very considerable extent. He concludes, therefore, that this rotatory movement of the ulna is not normal, but is due to a partial subluxation.—*Medical Record*, 29th Nov. 1884.

EXPLOSIVE DRUGS.—Several instances are related in the *Deutsch Medicinal-Zeitung* of 29th September 1884 of injuries resulting from the explosion of compounds ordered in physicians' prescriptions. A gargle was ordered of chlorate of potassium, chloride of iron, and glycerine. It was prepared, and five minutes later the bottle exploded in the purchaser's pocket, wounding him quite severely with the fragments of glass. A mixture of hypophosphite of lime, chlorate of potassium, and lactate of iron exploded and nearly killed the prescription clerk who was compounding it. Even the simple trituration of calcium hypophosphite is dangerous; a young pharmaceutist was killed by an explosion which was caused by the shaking of a solution of this substance. Physicians not unfrequently order a solution of chromic acid in glycerine. But when the acid is added quickly and all at once to the glycerine a readily explosive substance like nitro-glycerine is formed. Chlorate of potassium when mixed with tannin or muriate of morphia often explodes. The combination of iodide and preparations of ammonia must be made cautiously, as iodide of nitrogen is formed, which explodes on the slightest touch. Indeed, one ought to be very careful in ordering and compounding mixtures in which easily reducible substances enter—such as the chlorates, the hypophosphites, the nitrates, preparations of iodine or ammonia, chromic acid, glycerine, permanganate of potash, etc. If physicians would but remember the danger of explosions in preparing such compounds, they would less often put the lives of druggists and of their own patients in jeopardy.—*Medical Record*, 29th Nov. 1884.

TRACHEOTOMY IN CROUP, by George W. Gay, M.D., Surgeon to the City Hospital, Boston.—Dr Gay's opinions are, first, that there are three different affections for the relief of which tracheotomy may be required: "*First*, An acute, non-contagious disease of the larynx, characterized by the presence of false membrane. This is membranous or idiopathic croup, and is of rare occurrence. *Second*, An acute, contagious affection presenting a similar exudation in the larynx and other localities, accompanied by symptoms of blood-poisoning. This is diphtheritic or secondary croup. For twenty years it has been the prevailing type in the United States, and it is very fatal. *Third*, There are occasionally fatal cases of acute laryngeal stenosis, in which no membrane is seen during life or at the autopsy." Dr Gay is an advocate for operating in diphtheria. He says,—"Not a single case of pseudo-membranous laryngitis has ever recovered in this hospital without an operation. In the light of such evidence, I can but conclude that the expectant plan of treating croup is far from satisfactory. On the other hand, the results of the operative treatment are much more encouraging. . . . . So many desperate cases have been saved at the last moment by different operators, even resuscitation having been followed by success, that a resort to this measure is advisable under almost any circumstances." Dr Gay prefers early operation. "The advantages of an early tracheotomy are, that the patient is better able to undergo it; the strength is preserved, more nourishment can be taken, and more sleep secured; time is gained, in which it may be hoped that the disease will run its course; and finally, it seems reasonable to suppose, as is claimed by some writers, that it tends to prevent those pulmonary complications so common in the later stages of the disease. Other things being equal, early operations will probably give better results than late ones." With regard to the operation and subsequent treatment our author says,—"Having performed the high and low operation many times, I have come to prefer the former, because the trachea is more easily reached, there is less danger of hæmorrhage, and it is more easily controlled, there is less liability to abscess and emphysema, and because nothing is gained by opening the trachea an inch or so lower, as the obstruction, if present, is at or below the bifurcation. I do not hesitate to divide the cricoid cartilage, or the isthmus of the thyroid gland, and have never seen any harm result from so doing. The trachea is secured with a tenaculum before being incised, thus avoiding the danger of missing it, or of losing sight of the opening, mishaps which are embarrassing, and not uncommon. A moderate sized silver tube with a movable shoulder is always used. This has been worn in the above cases for periods varying from five days to two or three years. None of the patients have been compelled to wear it permanently.

"I have found the most satisfactory method of getting rid of the tube to be as follows:—About a week after the operation, if the respiration is free and easy, the canula is quietly removed, and the patient is left undisturbed. No trials are made to ascertain if he can breathe through the larynx. As the wound in the trachea contracts, respiration by the natural channel is gradually re-established." On the question, at present much debated, of sucking obstructing matter from the trachea, Dr Gay says,—"Nature gets rid of offending substances in the air-passages by means of forcible expirations or cough, and we should try to imitate her. The writer has been called upon to clear the bronchial tubes of blood under the following circumstances:—A young man was brought to the hospital who had shot himself in the mouth, the ball lodging in the back of the neck to the left of the spinous processes. The patient having been etherized, an incision was made, and the bullet was readily extracted. At that moment, however, his face became livid, and he ceased to breathe. The trachea was immediately opened, a large catheter introduced, and air was forcibly blown into the lungs, with the result of driving out a large quantity of blood.[1] Respiration was soon re-established, and consciousness returned. The ease and rapidity with which the blood was ejected from the bronchial tubes was as surprising as it was satisfactory.

"It is a physical impossibility to suck anything out of the trachea, unless air has a free ingress to supply the vacuum. Forcible distension of the lungs through a tube is attended by a return current of air, the velocity of which is in direct ratio to the power exerted. This effect is much more readily obtained by strongly inflating the lungs than by suction.

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[1] The source of the hæmorrhage was from a wound in the vertebral artery; it did not recur, but the patient died of pleurisy in a week.

"Furthermore, in cases of croup, whether contagious or not, no one is called upon to risk his life in trying to suck out the contents of the bronchial tubes. Too many valuable lives have been sacrificed in that way, and in view of the fact that there are other and better methods of accomplishing the object, the plan should be totally abandoned. Forcing air into the lungs from the mouth of the operator is rapid, efficacious, and comparatively safe; trying to empty the bronchial tubes by suction is always dangerous, and rarely successful."

These quotations show that Dr Gay is a man of common sense, as well as a practical and scientific surgeon.

INGROWING TOE NAIL.—Mr J. Greig Smith, in the *Bristol Medico-Chirurgical Journal,* of which he is editor, in an article on the above subject, recommends complete removal, not only of the nail, but also of the matrix and surrounding soft parts by the knife—in fact, a clean sweep. He afterwards winds a strip of boracic lint firmly round the toe, and allows the patient to use the foot. The advantages of this operation are that it can be done very quickly, it being possible to do both toes while the patient is under nitrous-oxide gas; the nail cannot again trouble the patient, for none will grow, or only a mere stunted production; and there is no lengthened period during which a new nail has to be trained to grow straight. As Mr Greig Smith says, "The loss of the toe nail, at its best, can never be a great one; and when it is ingrowing its loss is a gain."

REMARKABLE CASE OF RECOVERY OF A LIMB AFTER ALMOST COMPLETE SEVERANCE.—Mr Rushton Parker, of Liverpool, reports in the *Liverpool Medico-Chirurgical Journal,* the case of a young woman whose elbow was dislocated, with the humerus protruding about 4 inches, and the main vessels completely torn across. The house surgeon at the infirmary ligatured the vessels, and, as the arm was cold, sent for Mr Parker to amputate the limb, covering the wound with an antiseptic dressing. Mr Parker on his arrival found the arm had become warm, though there was no pulse. It was decided not to operate. The limb was flexed to keep the bones in position, the wound left quite open to avoid tension, and the whole dressed with most careful antiseptic precautions. The parts healed in less than four weeks, with only a linear cicatrix, and the patient recovered perfect movement of the joint. This case is undoubtedly a perfect triumph of conservative surgery, aided by Listerian antiseptics.

INTERESTING CASE OF RECOVERY AFTER SECONDARY AMPUTATION FOR GANGRENE AFTER INJURY.—Mr Rushton Parker reports in the same journal the case of a man, aged 53, who sustained an injury to his upper arm by which the humerus was comminuted, and the axillary vessels torn through, though the skin was not broken. When seen by Mr Parker the arm was cold, but as the man was in too low a condition to stand an operation, and as the integument was whole, it was decided not to amputate. (The whole limb was enveloped in a Listerian dressing.) After six days the line of demarcation was well formed, and amputation at the shoulder was performed. No hæmorrhage took place, and only some small vessels required to be tied—the main artery being already plugged. The man ultimately recovered; indeed, he seems to have improved daily from the time he was taken to the infirmary. This is one of those cases which might be more numerous, where the knowledge that we can keep a dead limb from putrefying by the proper application of antiseptics, enables us to delay operating till the patient has strength to bear the shock of the operation.

Part Fifth.

MEDICAL NEWS.

Royal College of Surgeons, Edinburgh.—The following gentlemen passed their final examination at the sittings held in January 1885, and were admitted L.R.C.S. Ed.:—Henry Walter Syers, M.A., M.D. Cantab., Bournemouth; John Richard Rygate, London.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 5th January 1885, and were admitted L.R.C.P. Ed.:—Leonard Joseph Kidd, London; Frederick James Greig, Edinburgh; Peter Gordon Meldrum, Edinburgh; George Tobin Dashwood Becher, London; Edward Francis Coghlan, Lougton, Staffordshire.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sitting held in January 1885, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Lawrence John B. P. Fernandez, Calcutta; Adolphe Frederick Seelenmeyer, London; William Haines, Cork; Augustus Keppel Joseph Reed, Donegal; James Francis Donegan, Cork; George Lennox Moore, London; James Joseph O'Bryen, London; Charles Chambres, Carnarvon; John George Uppleby, London; Graham Philip Godfrey, Mansfield Godfrey; Michael Henry Taylor, Dublin; Robert Honohan Cogan, Bradford, Yorks.; Thomas James Walker, Heckmondwike, Yorkshire; George Bower, Macclesfield; Richard Bland, Co. Kerry; J. T. Cook, London; Roger Thompson Darwin, London; Edward John Thomas, Chester; Aubrey Blakiston, Sheffield; Robert Farquharson Bowers, Edinburgh; Willington Dowman, Cork.

Royal Colleges of Physicians and Surgeons, Edinburgh, and Faculty of Physicians and Surgeons, Glasgow.—The following gentlemen passed their final examination for the triple qualification in Medicine and Surgery at the sittings held on 27th January 1885, and were admitted L.R.C.P. and S. Ed., and L.F.P. and S. Glasg.:—Peter Lynch, Edinburgh; James Tracy Simpson, Edinburgh; Stanley John Wallace Hayman, Southsea; Henry Clinton Davies, Athenry, Co. Galway; J. H. Douglas Redding, London; William Hall, London; Samuel E. Falconer, Edinburgh; Lewis Dransfield Brown, Ealing; William Norrie Robertson, Edinburgh; Thomas Arthur Leishman, Edinburgh; James Charles Clark, Glasgow; Herbert Molesworth Sweetnam, Dublin.

Portrait of the late Professor Spence.—We have received a lithographic portrait of the late eminent Professor of Surgery in the University of Edinburgh, published by Mr Menzies of Glasgow. It is an exceedingly happy likeness, for, while preserving the characteristic features, it shows Mr Spence in one of his happier moods. His smile (which was often a passive one, occasionally even sardonic) is here expressive of pleasant humour. He has just been told a good story, and is prepared to cap it with a better one.

List of Candidates who were successful for appointments as Surgeons in Her Majesty's British Medical Service at the competitive examination in London in February 1885.

No.	Name.	Marks.	No.	Name.	Marks.
1.	Hickson, S.,	2540	24.	Adams, G. G.,	2130
2.	Fletcher, H. J.,	2480	25.	Shine, J. M. F.,	2120
3.	Lindeman, S. H.,	2445	26.	Day, W. B.,	2110
4.	Davis, E.,	2430	27.	Hamilton, D. R.,	2100
5.	Powell, S.,	2410	28.	Thompson, R. G.,	2080
6.	Jones, F. W. C.,	2335	29.	Blackwell, C. T.,	2070
7.	Meek, J.,	2320	30.	Power, R. J.,	2070
8.	Morris, A. E.,	2310	31.	Kilkelly, C. R.,	2065
9.	Cormack, E.,	2300	32.	Bean, W. H.,	2020
10.	M'Millan, J. F.,	2290	33.	Ferguson, N. C.,	2010
11.	O'Donel, C.,	2275	34.	Wills, S. R.,	1980
12.	Carte, W. A.,	2270	35.	Hearn, M. L.,	1960
13.	Fitzgerald, A. O.,	2270	36.	Deeble, S. L.,	1950
14.	Elderton, F. D.,	2260	37.	Hall, R. H.,	1950
15.	Sheldrake, E. U.,	2230	38.	Bennett, W. H.,	1940
16.	Molesworth, R. E.,	2220	39.	Greenway, J. H.,	1921
17.	Long, J. W. F.,	2215	40.	Hanley, R. G.,	1880
18.	Josling, C. L.,	2210	41.	Bell, W. H.,	1875
19.	Bateson, J. F.,	2180	42.	Cree, G.,	1850
20.	Swan, W. T.,	2180	43.	Philson, S. C.,	1850
21.	Bulfin, J.,	2175	44.	Nicolls, J. M.,	1830
22.	Macleod, R. L. R.,	2145	45.	Harris, F. W. H. D.,	1800
23.	Curtis, J. H.,	2140			

An Appeal from the Surgeons of the Indian Medical Service, is in the form of a pamphlet, printed at Lahore, 1884, and without the name of an author. In it we have various grievances in connexion with the Indian Medical Service discussed, and especially the question as to the pay of the principal officers in the department, and certainly, from the statements made and quotations given from various official sources, it seems that there are good grounds for what is complained of. The following may be taken as an example:—In the memorandum under which officers accept employment in the Indian Medical Service, we find it is apparently clearly stated that medical officers under five years' service, and having passed the lower examination in Hindustani, will receive at least rupees 400 per mensem; but it appears this is dependent upon their getting charge of regiments, and as there are evidently not sufficient regiments for all the medical officers of this length of service, a large number have to do without this full scale of pay, and still continue to draw the "unemployed pay" of Rs.286.10, the same as they got upon first landing in India. The hardest cut of all seems to be that these same officers, with their unemployed pay, may be ordered to do duty in an army medical hospital, and there do the same work as their professional brothers of the Army Medical Department, but only drawing the Rs.286.10 per month. The writer says promises made before joining are broken, and they are a neglected body; and not a little of this is due, he thinks, to the "*laisser faire*" method in which the head, or heads of the department take things. The conclusion to be drawn is, that young men desirous of joining what *formerly was* the finest medical service in the world, would do well to find out, and have clearly stated in black and white, the true state of things before entering.

EARTH AS A SURGICAL DRESSING.—In this age of rapid progress many new and not a few valuable remedies are yearly added to the list of agents employed by physicians in the treatment of disease. In the active search for therapeutic novelties it often happens that old and valuable agents are overlooked, or at least laid aside until some new fact in their use is developed by larger employment than that assigned to it by the Pharmacopœia. This fact has been developed in the history of a number of remedies, and a most striking example is now presented in the history of the muriate of cocaine, so highly praised by recent authorities as a local anæsthetic. Another agent employed for many years by various practitioners of medicine and surgery as a local application to diseased tissues is familiar to many under the well-known name of "Mother Earth." Ordinary earth taken from various sources has been used with success in the treatment of ulcers, eruptions, burns, and insect bites for many years. Its employment has never been reduced to an art, and its name has probably not found its way into the Pharmacopœia, nevertheless it has been used frequently and successfully, not only as a domestic remedy, but has been employed by many physicians as a surgical dressing. It is well known that the value of an agent resides in its purity and uniformity of combination as much as in the mode in which it is employed. This rule certainly applies to all medicines employed internally. It is believed that those remedies used locally should possess the same features. Ordinary earth, when used as a surgical dressing, has been taken from any available source, and we are not aware that an effort has been made by surgeons employing it to secure a preparation of earth that possessed a uniform combination, or that was free of organic matter. Quite recently the National Pharmacy Association of Baltimore has presented to the medical profession an earth to which they have given the name Mineral Earth. We are informed that this earth has been prepared by combining different geological strata in such uniform proportions that the result is a pure powder free from all traces of organic matter, and composed of earthy salts which possess valuable astringent and antiseptic properties. The powder is soft and pleasant to the touch, and when mixed with water, vaseline, glycerin, or the cerates, makes a paste having valuable properties as a dressing for a number of surgical conditions. This preparation of earth commends itself to the medical profession as a most desirable form in which to employ the earth treatment of wounds, ulcers, and cutaneous diseases. We understand that it has been used by a number of physicians with much satisfaction and success.

THE CROW AND THE COUNTRY DOCTOR.

(A MEDICAL FABLE.)

A FLOCK of Crows was much alarmed one day at the sight of a strange object in the midst of a field upon which they customarily fed. They at once called upon an Old Crow who practised his profession in those parts, and who made a specialty of corns, to give his opinion about the matter. The Crow, having examined the object, shook his head, and said that it was a serious case, and that it was lucky he had been summoned so soon, though he should have been called earlier, and he would like the advice of his friend the Owl, who had had the benefit of travel abroad, and who was particularly skilful in cases which called for the Steady Use of the Eyes. He would also like to have the Frog, who was spending his summer vacation by a neighbouring pool, and who had a wide reputation for his physiological knowledge, to see the case. The Crow, the Owl, and the Frog met, and having studied the object at a suitable distance, withdrew to the shade of a High Wall in order to deliberate. The Frog first opened his mouth, and observed that it was a nice Case, which reminded him of a very curious experience that he had had with a piece of Red Flannel two summers before, when he received a severe contusion upon the centre of Goltz. After telling all about this very apposite event, the Owl observed that such cases were extremely rare. He had, however, had two very much like them, the details of which he had forgotten. He then related some very humorous obstetrical stories, which much amused the Crow.

Having received these opinions, the Crow thanked his Colleagues for the valuable light they had furnished. He had himself been at first disposed to think the trouble a case of *Terror Corvorum*, or Scare-Crow; but the advice given reminded him now that the appearance in the cornfield exactly resembled a country doctor whom he occasionally met, and who, after practising medicine for forty years, was at present trying to live on What he had Saved.

This diagnosis was finally agreed upon, and reported to the anxious Crows outside, who were much relieved.

MORAL.—This story shows the profit that is got from consultation, and the lucrative nature of the practice of medicine.

OBITUARY.

JOHN DICK, M.D., MIDCALDER.

DR DICK graduated at Edinburgh in 1816, settled to practice at Midcalder in 1821, and after upwards of 40 years' hard work retired. He died at Edinburgh on 22nd January, in his 94th year. Having studied when accurate knowledge of anatomy could not be gained during student life, he soon left his practice in charge of the late Dr Lucas, and spent a winter at Paris in the dissecting-room and hospital, acquiring at the same time a familiarity with the stethoscope earlier than his country brethren generally. Returned home, he soon established a wide and lasting reputation, which, however, never brought him a lucrative practice. He was in truth an accomplished physician, and could hold his own, as the saying goes, with consultants from town. A rigid inquiry into the facts of a case was his habit, alike in the homes of the poor as of the rich. Often at the first visit in serious cases would he make the friends aware that he had made but a provisional diagnosis, and this never seemed to lower him in their confidence. Medical societies knew him not, and it is regrettable that medical journals received not contributions from his pen, as these would have been eminently sensible and trustworthy. Unwearied in reading so as to be abreast of advancing medical and also general science, sagacious in thought, upright in action, sincere though unobtrusive in piety and benevolence, he was regarded as one that adorned his profession; and on several occasions he had the gratification of being let into the knowledge of the esteem in which he was held by his patients and friends publicly presenting him with costly and handsome memorials.

In 1859, the writer had the good fortune to be shown by Dr Dick the perfectly typical pulse that was the guide to venesection in inflammations in his earlier years, and was by that date such a rarity. It may be permitted to add that such an illustration from a man of Dr Dick's calibre was worth a pyramid of arguments that the vital physics of inflammation had not undergone a change.

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W. H. Dickinson, M.D., etc.,—On Renal and Urinary Affections. Longmans, Green, & Co., Lond., 1885.

T. A. Emmet, M.D., LL.D., etc.,—The Principles and Practice of Gynæcology. J. & A. Churchill, Lond., 1885.

D. Berry Hart, M.D., etc.,—Contributions to the Topographical and Sectional Anatomy of the Female Pelvis. W. & A. K. Johnston, Edin., 1885.

H. Aubrey Husband, M.B.,—Aids to the Analysis of Food and Drugs. Baillière, Tindall, & Cox, Lond., 1885.

Prof. S. Jaccoud,—The Curability and Treatment of Pulmonary Phthisis. Kegan Paul, Trench, & Co., Lond., 1885.

H. Macnaughton Jones, M.D., etc.,—Diseases of Women and Uterine Therapeutics. Baillière, Tindall, & Cox, Lond., 1885.

A. Cowley Malley, B.A.,—Photo-Micrography. H. K. Lewis, Lond., 1885.

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Léon et Jules Rainal.—Les Bandages l'orthopédie et les appareils a pansements. J.-B. Baillière et Fils, Paris, 1885.

A. Ransome, M.D.,—On the Limits of the Infectiveness of Tubercle. J. E. Cornish, Manchester, 1884.

H. A. Reeves, F.R.C.S.E.,—Bodily Deformities and their Treatment. H. K. Lewis, Lond., 1885.

Wm. Roberts, M.D., F.R.S.,—Practical Treatise on Urinary and Renal Diseases. Smith, Elder, & Co., Lond., 1885.

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W. S. Savory, F.R.S.,—The Pathology of Cancer. J. & A. Churchill, Lond., 1885.

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PERIODICALS RECEIVED.

Albany Medical Annals,—Jan.
Alienist and Neurologist,—July-Oct.
American Druggist,—June-Jan.
American Journal of the Medical Sciences,—July-Jan.
American Journal of Neurology and Psychiatry,—May-Nov.
American Journal of Obstetrics,—July-Jan.
American Practitioner,—July-Jan.
Analyst,—July-Dec.
Annales de la Société de Médecine d'Anvers,—Nov.
Annales des Maladies des Organes Génito-Urinaires,—Jan. 1.
Annales d'Oculistique,—May-Dec.
Annals of Surgery,—Jan.
Archives Générales de Médecine,—July-Feb.
Archives de Tocologie,—July-Feb.
Asclepiad,—July-Jan.
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ORIGINAL COMMUNICATIONS.

I.—REPORT OF A CASE OF PREGNANCY IN THE LEFT HORN OF A BIFURCATED UTERUS TREATED SUCCESSFULLY BY HYSTERECTOMY, WITH OBSERVATIONS UPON THE NATURE AND THE PROPER TREATMENT OF SO-CALLED "MISSED LABOUR."

By Angus Macdonald, M.D., F.R.C.P. Ed., F.R.S.E.; Physician and Clinical Lecturer on the Diseases of Women, Royal Infirmary; Lecturer on Midwifery and Diseases of Women and Children, Medical School, Edinburgh.

(*Read before the Edinburgh Obstetrical Society*, 11*th February* 1885.)

The following case presents many characteristics of unusual interest, and is laid before this Society in the hope that it may help to clear up some points in a dark and disputed region of obstetrical science, and may contribute an additional fact in favour of what seems to me the proper treatment of such cases.

In the first instance I would begin, however, by frankly owning that I made an inexcusable but happy mistake in diagnosis. For reasons to be afterwards pointed out, I entirely mistook the true nature of the case. I believed I was dealing with a rapidly growing fibroid in the anterior wall of a small uterus. A little more care in investigating the history of the illness would readily have prevented me from falling into this blunder. But for the patient's sake I feel profoundly thankful I did come to an erroneous conclusion, as, had I not done so, I should not have had the courage, with the views I then entertained, to follow out what I now believe to be at once the boldest and the safest method of treatment, and, by adopting more seemingly accredited methods, should almost certainly have lost my patient.

I have recorded the case, not as we at first made out the history, but as we obtained it after very strict cross-examination of an unusually stolid and stupid patient.

The history we first made out was that the patient, having given birth to a living child at term three years ago, had noticed this lump gradually increasing in size during the last two years, whilst her menstruation continued regular. On examination I found the sound entered a cervix of the usual firm non-pregnant character the distance of a little over 2½ inches, and that a hard tumour, movable, smooth, and continuous with the cervix, without any bruit, occupied the abdomen. On these data, considering that a tumour of the uterus of a fibroid character had attained in a young woman such huge dimensions, and explaining the absence of excessive flow by the smallness of the uterine cavity, I came to the conclusion that it would be better to relieve her at once of this growth, which, if left alone, was certain to increase to such an extent as would seriously imperil the patient's life, and which would every year be more difficult to extirpate. How imperfect our history had been will be seen in the sequel of the case, which runs as follows:—

Mrs B., æt. 23, residing at Slamannan, was admitted 8th January 1885, complaining of an abdominal tumour. The patient had been generally healthy previous to the present illness. She has been married four years, and has one living child, which was born on 9th March 1882.

So far as patient remembers, she menstruated for the first time after the child's birth in the end of February 1883. After this she did not menstruate again, but considered herself pregnant, and felt life first in June. On 1st January 1884 she had very severe pains, lasting with scarcely any intermission for three days. On the third day a red discharge appeared in lumps; one lump was bigger than the rest, and was pronounced by the doctor in attendance to be a bit of a *conception*. The discharge stopped on the following day, and the pains gradually left her. She remained in bed for three weeks at this time, and then resumed her ordinary duties. Menstruation reappeared in March 1884, and has been quite regular ever since. A bad-smelling yellow intermenstrual discharge appeared in April 1884, and lasted for about a day. This recurred in the following two months.

Physical examination, 11th January 1885.—The lower part of the abdomen is occupied by an oval solid tumour, freely movable from side to side, the long axis of which passes obliquely from the left downwards towards the right, bisecting nearly at right angles Poupart's ligament on the right side. Perpendicular height of the tumour above the symphysis is 8 inches. Its greatest breadth transversely is 7 inches. In the direction of its longest diameter it is 9½ inches. It extends 1½ inches above a transverse line passing through the umbilicus. No bruit is heard over any part of the surface. A flattened movable body is felt at the left side of the tumour not far from its upper extremity, apparently an ovary.

P.V.—The cervix feels quite natural, firm, but not fibroid, and runs into the abdominal tumour. The outer os is natural, and does not admit the examining finger to pass it. Sound passes upwards and backwards 2½ inches. The tumour encroaches considerably on the left broad ligament.

Assisted by Dr Caird, I proceeded to the operation of laparotomy on 26th January 1885. The abdomen was opened with ease; there

were no adhesions to the tumour, which was connected inferiorly by a pedicle having the appearance of the cervix. The left ovary was situated high up in front of the left side of the tumour, the right ovary low down in the brim of the pelvis. Fearing that if the right ovary and tubes were included in the ligature important organs would be injured, the wire of the clamp was passed between the right ovary and the tumour, and then tightened. On proceeding to remove the tumour by scissors, a yellowish-brown semi-fluid material escaped. On further progress, an arm and the bared ribs of a fœtus were discovered in the interior of the tumour. The whole was removed with as great rapidity as possible, care being taken to prevent any of the semi-fluid material above mentioned from entering the abdomen. The pedicle was shortened further, and after sponging the abdomen carefully clean, the parts were brought together, the pedicle being secured in a Bantock's clamp at the lower angle of the wound. The surface was dressed with powdered iodoform and salicylic wool, and a bandage applied in the usual manner.

DESCRIPTION OF PARTS REMOVED.

1. *Description of Fœtus.*—The fœtus lay doubled up in the uterus, the neck strongly flexed, the lower limbs drawn up in contact with it. The head was contained in the left upper extremity of the sac, the breech being downwards and towards the right. The right side of the spine presented at what appeared to be the internal os, as did also the right elbow. The flexor aspect of the fœtus, including the head, left lower extremity, and left arm, were well preserved, and had the usual characters of a macerated fœtus; from the level of the spines of the scapulæ downwards, including the outer posterior aspect of the right leg, the soft parts have disappeared, laying bare the spinal column and the ribs, as also exposing a small portion of the left scapula, nearly the whole of right scapula, the arches of the vertebræ, and opening the elbow joint of the right arm. The fœtus weighed 5 lbs. 6 oz., and measured 19 inches. It was of the male sex.

2. *The Sac containing the fœtus*, of which a reduced drawing by Dr Caird follows this paper, was composed of ordinary uterine tissues covered entirely with peritoneum, and had the following dimensions:—Height 6½ inches, breadth 7½ inches, length of Fallopian tube 6½ inches, ovary 2 inches long, containing indications of an old corpus luteum. The walls were very markedly thicker inferiorly than superiorly, and they gradually and markedly *became thinner* as the upper part of the tumour was reached. About two-thirds of the tumour was situated to the left of the mesial line, as indicated by a slight wound received on making the abdominal incision. Towards the extreme left it terminated superiorly in a blunt rounded extremity. To its upper left anterior surface were attached the round ligament,

the tube, and the ligament of the ovary. The insertion of the tube, however, which was highest up of the three structures, was considerably below the highest point of the tumour. No indication whatever of the origin of the right tube or of the ovarian or round ligament could be found in the part removed. The portion which formed the entire base of the tumour removed, which was triangular in shape and attached to the pedicle, was subsequently removed *en masse* from the end of the pedicle above the wire. Its internal surface presented several honeycomb-like depressions. One of these, at the extreme right of the pedicle, perforated the thickness of the part cut off, and was found to be of oval shape, measuring in its greatest diamater 11 mm., and in its narrowest 5 mm. Only on some portions of the interior of the tumour could patches of membrane be made out. The placenta was clearly seen to be still adherent to the uterine surface, and connected to the fœtus by a very brittle funis. It was very much flattened, and almost papyraceous in consistence. Here and there, over the interior of the sac, there were thin plates of irregular shape and size, varying from a ¼ to ½ inch in breadth, made up of hard, brittle, adipocere looking material. The whole interior of the sac was smeared with brownish-yellow stuff. There was no appearance of any threatening to rupture in any part of the tumour, nor, indeed, could any specially thinned or deficient part be made out in the sac. The sac and placenta weighed together 1 lb. 8 oz.

The patient's recovery was uninterrupted. She complained of great pain during the first twenty-four hours, and had ¼ gr. of morphia given hypodermically three times during that period. She had an unusually quick pulse in the evening of the operation, which was accounted for by some hæmorrhage having taken place apparently from the lower part of the wound. Patient passed wind on the second day. Bowels were moved on the eighth day after castor oil had been given. The deep stitches were removed on the tenth day. The stump fell off on the twenty-fifth day.

[On the 2nd of March vaginal examination revealed the cervix high up, and rather difficult to reach. The sound was passed, and entered upwards and slightly to the right a distance of fully 2¼ inches.]

The temperature rose on the night of the operation to 100°·5 at 8 o'clock P.M., but slowly fell to 99°·2 at midnight. From that point it gradually rose during the second day to 102°. On the morning of the third day it reached 102°·2, its maximum. After this it gradually fell, reaching the normal on the sixth day, and continuing so. The pulse throughout corresponded with the temperature.

Such, then, is the history of the case and description of the tumour and contents. It is abundantly plain from the history, the size, and especially the length of the fœtus, that this was a case in which utero-gestation had continued to the full term of pregnancy, and that the mature fœtus with its membranes had been contained within the uterus for over twelve months after the death of the child. Meanwhile certain changes of a decomposing character had been slowly taking place, and yet no putrescence properly so-called had occurred in the contents of the fœtal sac. Everything within it smelt perfectly sweet. That the sac did in some way communicate with the cervical canal was all but proved by the escape, if we can believe the patient, of some bad smelling matter on three separate occasions. That, however, the communication between the cervix and the sac was anything but free is proved both by the only indication of an opening in the upper part of the pedicle, which formed the entire base of the sac, being one which I show you, and which is only 11 millimetres in length by 5 millimetres in breadth, as also by the complete absence of putrescence in its contents. Had there not been nearly absolute separation between the cervical cavity of the uterus and the fœtal sac, it is impossible to believe that air would not have entered the cavity and have led to decomposition of its contents in the course of twelve months. That such putrescence is exceedingly apt to take place is abundantly testified by the numerous cases of so-called missed labour recorded by M'Lintock, Barnes, and others.

The question now arises, What have we before us in this sac? and what bearing have our views regarding it upon the nature and treatment of missed labour?

It will be noticed that there is no room for doubt about the sac being uterine. It gives attachment to the uterine appendages of the one side, and is entirely covered by peritoneum, whilst the tissue is unmistakably uterine tissue. It will be observed, however, that the uterine appendages of the right side are entirely wanting. From the history of the operation it will be gathered that the right ovary and tube were situated low down on a level with the brim of the pelvis, and that, not caring to take so much tissue in the grasp of the wire of the clamp ligature lest I should include the ureters or other important organs, I passed the ligature to the inner side of the right ovary, and nearer the tumour than it.

It will also be noticed that though the tumour has been cut from its pedicle about 4 inches lower down than the level of the insertion of the left Fallopian tube, there is no trace of any portion of the right tube, broad ligament, or ovarian ligament of the right side upon the fœtal sac. Furthermore, it is to be observed that the tumour is not a symmetrical oval, but rather assumes the shape of a cone with a blunt point upwards towards the left, and its broad base low down towards the right side. I happened in making the abdominal incision to carry the knife rather carelessly, and in doing so to slightly graze the peritoneal covering of the tumour. This line, therefore, was without doubt in the mesial line of the body. It will be seen, on examining the specimen, that at least two-thirds of the tumour lie to the left of that line. This unsymmetrical disposition of the tumour was noticed before the operation, for, on recurring to the physical examination, it will be seen that it is stated that the tumour is obliquely placed in the abdomen. Its longest diameter, which passed from above downwards from left to right, bisected the right Poupart's ligament nearly at right angles. Such an unsymmetrical disposition of the tumour was quite consistent with the notion of its being a fibroid. It was, however, not consistent with our ordinary notions of pregnancy, and it thus helped to distract my ideas from the possibility of pregnancy.

Another consideration of importance is that the wall of the cyst, instead of being thinner towards its lower segments and thickest of all at the summit, which is the case with the ordinarily pregnant uterus, is markedly thicker inferiorly than superiorly—in fact, gradually thins towards its highest point. All these facts demonstrate that the tumour is uterine, but at the same time that it is not made up of an entire uterus. There is, furthermore, nothing in favour of its being regarded as an interstitial pregnancy, as the tube is of ordinary length, and the uterine tissue well developed all over.

On thinking over the case I was very much puzzled what to make out of it, until on examining into the literature of Porro's operation I stumbled upon a case of Litzmann's recorded by Werth in the *Archiv für Gynäkologie,* Bd. xvii. S. 281. That case is so exceedingly like mine in almost all its particulars, with the sole exception that the tumour projected obliquely towards the right and upwards, whilst mine projected towards the left and upwards, that I feel certain it is of an identical nature.

Litzmann's case presented the symptoms of what is usually called "missed labour." The patient was 39 years old, had previously borne two living children at full time, just as my patient had borne one. When she came under Litzmann's care she had already passed three months the period when her pregnancy was due. The motions had ceased as the pains came on. On the suspension of fœtal movements, slight feverish symptoms, general uneasiness, and pain supervened. These rapidly disappeared, and the patient returned to her usual health. But, with some diminution of the bulk of the abdomen, a bloody discharge began to appear from the genitals.

On examination of the abdomen the following is the condition noted by Litzmann:—"The abdomen is occupied by a tumour of the size approximately of a uterus pregnant in the eighth month. The tumour is freely movable in the transverse direction, inclines somewhat towards the right, and rises there a handbreadth above the umbilicus. The tumour does not form a regular oval, but runs out towards the right and upwards into a blunt cone, the base of which passes over with a shallow inward bending in the mesial line into the left half of the tumour, which is less elevated and more rounded superiorly. The tumour is broadest at the umbilicus. Its consistence is hard, like a board, with the exception of the left prominence, which feels somewhat softer, and manifestly fluctuates."

P.V.—"The os uteri, a circular opening, bounded by short lips, is situated in the left posterior part of the pelvis. The examining finger can be passed through it 3–4 centimetres into the cervical canal, which, with a slight deviation towards the left, runs in the axis of the vagina, and gradually becomes narrower upwards. . . . . . . "The fœtal head is found resting at the brim of the pelvis. A markedly projecting suture in it is felt through the anterior cervical wall in the direction of the left oblique diameter. Over the examining finger there is poured out continuously a stream of thin, yellowish-red fluid, of a horridly stinking odour."

"The diagnosis was retention of a mature putrid fœtus inside the uterus."

Litzmann proceeded to remove the uterus and fœtus by the Porro-Müller operation, with Listerian precautions. The steps of the operation I need not refer to. But it is germain to my subject to observe that "on the extirpated fœtal sac there were found only the annexa of the right side. The pregnancy had therefore its site in one horn of the uterus. Whether the other half of the uterine structure was present, and in what form and connexion with the pregnant side, could not be determined by means of the observations made at the operation."

After two days the patient died, not apparently from anything directly traceable to the operation, but in consequence especially of the poisoned condition of her system by the putrescence of the tumour before operation. An opportunity was thus afforded to examine the parts remaining beyond the stump in the pelvis. What concerns us most of the sectio is the following:—

"The sewed-in stump, after loosening the wire loop constricting it, proved to be the remains of a right uterine horn. The left horn, whose body was bent nearly at a right angle to the cervix, and directed straight backwards, measured 6 centimetres (=2½ in.) in length. Of this the neck took up 3½ centimetres. The circumference of the cavity at the external orifice was 5 centimetres, at the inner os uteri 2·5 cm. The thickness of the wall, which was uniform throughout, amounted to 1·5 cm. The tube belonging to this horn was 9 cm. long. The ovary, distant from the uterus 1½ cm., measured in length 4·5 cm., in height 3 cm., in thickness 2 cm., and contained a translucent cyst the size of a cherry.

"Just within the os uteri, which was markedly notched on both sides, there is situated to the right and forwards an opening the size of a *hempseed*, by which we could reach into the cavity of the amputated horn. This horn passes immediately from the right anterior surface of the left uterine neck, occupying with its insertion the entire length of the latter. The cavity (of the right horn) is very narrow immediately above the point of communication, widens upwards in a funnel-shaped fashion, and attains at the free end of the stump a circumference of 4 centimetres.

The thickness of its walls here measures 2½ cm. The inner surface of the cavity presents a surface which is spongy, soft, and not smoothly covered." See drawing annexed.

The only other extract I would make is from the description of the fœtus. "The fœtus in external appearance and bulk appears completely mature, and is of the male sex. The intrauterine process of decomposition has produced in it extensive destruction. The extensor aspects of the fœtus have especially suffered, in the trunk as well as extremities. In the latter the large joints have been laid bare, and in great part opened, through disappearance of the soft parts, the articular ends of the bones being robbed of their cartilages, and the periosteum of the bared bones deficient. On the back the skin and superficial layers of muscles are destroyed, the deeper layers of muscle and fascia softened and broken up into shreds. The arches of the vertebræ, the projecting edges of the scapulæ, and the crests of the iliac bones, are laid bare. The same is true of the head, in which the soft parts are wanting from the occiput, so that the back part of the occipital, and the posterior edges of the parietal bones project free. . . . . .

"The soft parts on the flexor side, including the face, are relatively well preserved, being in the same condition as in a fœtus which has been macerated intrauterine."

This case of Litzmann's corresponds closely with mine in almost every particular, except that in regard to the relation of the tumour to the abdomen we must put right for left, and left for right, and that there had been longer time for the uterus to shrink in my case. On reading that case my doubts all disappeared, and I felt perfectly certain that mine was an example of pregnancy in the left horn of a bicornuus unicollis uterus. Seeing my patient, like Litzmann's patient, had previously undergone a normal pregnancy and parturition, it is clear that in both cases one of the horns communicated freely with the common cervix. But, as was proved in Litzmann's case by the irrefutable evidence of post-mortem examination, it seems to me unquestionable that in mine also the horn in which the pregnancy had in the second instance occurred was connected to the cervix by an imperfect channel, which did not permit of canalization and delivery according to the ordinary methods.

By assuming that pregnancy occurred in the left horn of a bicornual uterus all difficulties vanish. Thus the asymmetrical shape of the fœtal sac, and the attachment of only appendages of one side, are easily understood; the appendages on the right would, of course, be connected with the right horn. The occurrence of the previous natural pregnancy is also easily explained, as it must have been contained in the other horn. The regular recurrence of normal menstruation is likewise traceable to the menstrual engorgement of the other horn. The fact that I was able to pass the uterine sound the normal distance is likewise accounted for. I fully expect, when the patient is once completely recovered, to be able by clinical methods to prove the existence of the right horn, but as yet I dare not interfere with the course of the convalescence to the required extent.

[That this opinion was correct is shown above in the report, by my being able on 2nd of March to pass the uterine sound a distance of fully 2¼ inches.]

All astonishment regarding the possibility of such a pregnancy reaching the full time disappears also. Because, seeing that we have the certainty of regular pregnancy in the one horn demonstrated, we have only to assume that the vascular and muscular arrangements of the other horn were sufficient to permit of full-time pregnancy, although the cavity connecting that horn with the cervix was not sufficient to afford transmission of the fœtus into the common cervix.

The peculiar development of the walls of the fœtal sac is also explained by the consideration that the horn must necessarily be weak at its upper pole, which, as explained by Litzmann, must in consequence of the original oblique position of the horn be really developed out of a more and more distended upper segment of that lateral wall of the horn which is turned towards the mesial line. Besides the case referred to of Litzmann, only two other cases of full-time pregnancy in a rudimentary horn have been recorded so far as I have been able to find out.

Of these one was described by Professor Turner, and communicated to this Society in February 1866, in which the fœtus was carried to full time and then died. The death of the fœtus did not result in any marked discomfort to the patient so far as the report of Dr Scott of Dumfries, in whose practice it occurred, records. The patient died six months after the natural period of delivery ought to have occurred from phthisis apparently unconnected with the gestation. The uterus was removed with the contained fœtus in its left horn, and sent to Sir James Simpson apparently as a curiosity of extra-uterine gestation. Its true nature was only found out some years subsequently by Professor Turner, when inspecting Sir James Simpson's museum on the hunt for bicornual uteri. In this case no channel whatever could be detected on the most close scrutiny leading from the common cervix to the pregnant horn. In Turner's case, as in mine, it was the left horn which had been imperfectly connected with the cervical cavity. In this instance, also, the dorsal aspect of the fœtus had suffered absorption or destructive changes, whilst the anterior aspect was well preserved.

The other case was operated on by M. Salin of Stockholm, and the only account I have been able to obtain of it is an abstract rather incompletely given in the *Centralblatt für Gynäkologie*, No. 9, 1881. It concerned a newly married woman, aged 23. She menstruated for the last time in April 1879, and expected her confinement in January 1880. At this period the movement of the child ceased, after being specially active. In the end of February the patient experienced severe labour-like pains, which again stopped. In March she suffered from bleeding, continuing for eight days. On this supervened an attack of pain. The like occurred in April. In May there was pain, but no hæmorrhage. The abdominal tumour diminished in size from February, and the patient markedly lost flesh. On June the 4th she was admitted to Hospital. The abdomen was occupied in great part by a tumour extending from the symphysis to the xiphoid cartilage, on the right side passing along close upon the abdominal wall, and distending the right hypochondrium, whilst the hand could be inserted on the left between the tumour and the pelvis. The uterus was of normal size, movable, and anteflected. High up in the pelvis a small segment of the tumour could be palpated, from which there passed a broad pedicle to the supra-vaginal portion of the cervix uteri. The diagnosis was uncertain, but the case was regarded as most probably an extra-uterine pregnancy, although the size of the uterus, as well as absence of the discharge of a decidua, were opposed to that view. The patient urged to be operated on.

The temperature was 102°·2; pulse 120. The operation was conducted with complete Listerian precautions, the spray being used. Nothing was obtained on tapping the tumour after it was exposed in the abdomen, but a portion of a fœtus presented at the opening thus made. This was enlarged, and the fœtus removed. The tumour was now brought through the wound, and proved to be the one-half of a double uterus connected by a broad pedicle with the other half. The pedicle was tied with a catgut ligature, and the sac removed. The free hollowed-out end of the pedicle was examined and sponged clean. There was no communication to be made out between it and the cervical cavity, or with the vagina. The surface was covered with decidua. This was cleaned off, and the edges brought together with catgut and the pedicle dropped, as there was no bleeding. The abdominal wound was then closed, and a Lister's dressing applied. The patient made a good recovery. The temperature for the first ten days varied from 102°·2 to 104°. After that the patient was free from fever.

There is yet another case in Dr Godson's list in the *British Medical Journal*, 17th January 1885, of a similar nature operated upon by Dr Sänger. But I have not been able to find an account of it, though I have carefully searched all Sänger's papers in the *Centralblatt für Gynäkologie*, 1882, in which Dr Godson says it is reported, as well as his papers contained in the same publication during the years 1883 and 1884. These three cases, however, show the practicability of operative removal in cases of full-term pregnancy in a bicornual uterus. It is quite plain that it would have been easy to have removed the tumour in Professor Turner's case had the nature of the lesion been suspected, and had abdominal surgery been at the time in its present advanced condition.

Question of Missed Labour.—And now this brings one face to face with the question of "missed labour," which has been the subject of not a little discussion. It is, doubtless, difficult to understand how such a phenomenon could arise.

It is quite foreign to the experience of obstetricians in dealing with difficult and laborious cases to find that the uterine pains should come and go, and the uterus quietly subside again into inactivity without further immediate results.

The all but universal experience is that either the uterus ruptures itself, or, becoming inflamed, the patient dies of fever and exhaustion, along with her unborn child.

The question of missed labour is a very different one from that of missed miscarriage. In cases of death of the fœtus occurring before the completion of normal pregnancy, retention of the included ovum is not at all uncommon. I recently, through the kindness of Dr Peddie, was able to show you a dead fœtus and membranes, which did not appear older than three or four months, and yet had been unquestionably carried in the uterus six or seven months. Since that occasion I have had an analogous case in my own practice, in which the fœtus, however, had disappeared early, and the membranes were carried for five months or so. This is particularly apt to happen in the case of one of twins. Normally death of the fœtus during pregnancy is not followed by its expulsion earlier than from fourteen to twenty-one days.

But it is very different when we turn our consideration to cases of missed labour. Then we must assume that the uterus has become completely developed, both in its muscular, vascular, and nervous arrangements, so that under the influence of that law of maturity under which it comes into contraction at the end of the period of utero-gestation, it shall contract in opposition to the resistance offered to the expulsion of its contents, until it either succeeds in emptying itself, or perishes in the attempt. Nevertheless, a number of carefully observed cases have been reported where the uterus seemed to fail in this effort.

Restricting ourselves to modern times, Oldham,[1] Montgomery,[2] Menzies,[3] M'Lintock,[4] Duncan,[5] and, if I may be allowed to differ from his reading of his case, Barnes,[6] etc., have, among our own countrymen, watched such cases. In France, Germany, and America similar observations have been made from time to time. But it seems hardly necessary for me in this paper to refer to these more particularly. In these cases the pregnancies have proceeded to the full time; the uterus has been proved to contain the parts of the child, or at any rate the parts of the dead fœtus have, in a large number of the cases, been expelled or removed through the natural cervix uteri.

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[1] *Guy's Hospital Reports*, vol. v., 1847, pp. 105-112.

[2] *Dublin Quarterly Journal*, vol. xxxvii. p. 55, 1864.

[3] *Glasgow Medical Journal*, vol. i., July 1853, p. 129.

[4] *Dublin Quarterly Journal*, vol. xxxvii. p. 51, for 1864.

[5] *Clinical Lectures*, second edition, p. 24.

[6] Barnes, Robert, *London Obstet. Trans.*, vol. xxiii. p. 81.

In a very clever essay, published as a thesis at Paris in 1878, by Dr E. Müller of Nancy, an attempt is made to prove that all these cases were really extrauterine pregnancies which had ulcerated into some portion of the genital tract, and had thus deceived the various observers. I have looked over his essay with some care. It is doubtless interesting and thoughtful, but has much of the rashness of partially-educated youth in its hasty inductions. He attempts to prove too much in his endeavours to make all the various facts square with his theory. In this he is greatly aided by a lamentable looseness in the anatomical details of almost all the autopsies recorded hitherto. But the breadth of his view may be learned from the fact, that he declares a case to be undoubtedly extrauterine if menstruation is coincident with the retention of the fœtation in the abdomen. That one fact shows he has much to learn on the subject of pregnancy in a subsidiary horn.

I believe a proportion of such recorded cases may belong to the category to which Dr Müller would refer them all; but I dissent entirely from his sweeping inductions, and do not think he gives due credit either to the ability or the care of the very numerous and distinguished observers he proceeds to criticise. On the contrary to Müller, I have come to the decided conclusion that the bulk of these cases were really and truly intrauterine, the fœtus being developed in one horn of a bifurcated uterus. This conception of the case meets almost every possible requirement.

From the advanced destruction of parts in those few cases subjected to sectio, and, so far as I have been able to notice, from a complete neglect of observing the relations of the uterine appendages to the fœtal sac, it is easy to understand that a small uterine horn may not have been observed in any of them. On the other hand, from the experience of Litzmann and myself, it is easy to imagine that such a horn might be flattened out on the uterine tumour, or displaced so as to have been overlooked in those cases in which no post-mortem examination was allowed.

In a number of these unicornual pregnancies it is true, no doubt, that the horn ruptures early, as occurred in the former of the two cases recorded by Turner; but if the bifurcation divides the organ nearly equally, there are afforded, as Turner's, Litzmann's, Salin's, and my own case prove beyond cavil, conditions which permit the pregnancy to advance to the full time without rupture.

If, then, there is either an *absence* of tubular communication between the one horn and the common cervix, or if that connexion though present is *radically narrowed and incapable of dilatation* by the uterine contractions, labour becomes impossible, no progress whatever is made under the influence of the pains, the fibres have no opportunity to recover force when out of tension, as happens in ordinary labour cases, when the cervix opens up under the influence of the pains, and consequently the uterus rapidly gives up work by exhausting its contractility.

In the cases recorded by Turner and Salin, communication between the fœtal sac and the common cervix was seen to have been non-existent. In Litzmann's case and in mine, the cavity appears to have existed in an extremely rudimentary condition, not admitting of the possibility of dilatation. In cases such as Turner's, a difficulty arises about fecundation. According to Kussmaul the communication, though previously existing in these cases, must have been blocked up by inflammatory adhesion during the pregnancy. But Turner does not agree with this view. He is of opinion that impregnation must have taken place through the Fallopian tube of the horn whose pedicle was blind, either by that tube getting displaced on to the other ovary, or by the transmission of semen through the abdominal cavity from the other tube into it. The same would apply to Salin's case if his observations were accurate; but the statement is so brief that we cannot make certain of this. As a practical obstetrician, however, the greatest objection to the accepting of Turner's explanation appears to me to consist in the difficulty of understanding how a shut sac of that kind, capable of accommodating and developing a fœtus, would not give rise to trouble by the formation of hæmatometron, as it must be subject to the ordinary menstrual flux. In Litzmann's case and in mine, the communication between the impregnated horn and the cervix, although too small to give exit to a fœtus, appears to have been sufficiently large to admit the passage of semen.

In favour of missed labour it has been urged that the same phenomenon is seen to take place in some of the lower animals, such as the cow, the sheep, and the goat. It is always somewhat dangerous to argue in favour of any physiological or pathological condition in the human subject from what occurs in animals, whose physiological and anatomical arrangements are so different. In the present instance the argument seems exceedingly, and, indeed, glaringly faulty. In the cow, the sheep, and the goat the type of uterus is normally bicornual. The occurrence of occasional obstruction through defective communication between one of these horns and the common cervix might, accordingly, be anticipated in them; therefore, holding as I do that so-called "missed labour" is nearly always due to such accident, I maintain that its occurrence in these animals affords strong presumptive evidence that my contention is correct. Doubtless, as in these animals the bicornual condition is the normal one, we should not expect that irregularities of development would be found relatively so frequent in them as in the bicornual uteri of women, in whom the bifurcated condition is itself abnormal, and therefore likely to be associated with other developmental defects. This, to my mind, sufficiently explains the rarity of this accident in the lower animals, for it appears to be undoubtedly a rare occurrence in them. This explanation is so exceedingly obvious, that I am surprised it has not before now suggested the idea of missed labour being due to arrest of the fœtus through defect in one of the horns of a bicornual uterus, whose other horn was capable of normal delivery.

The possibility of patients suffering from so-called "missed labour" having had previous natural pregnancies, of the occurrence of stinking discharges and fœtal parts issuing through the normal cervix, of feeling the parts of the fœtus through a true, though in this case specially narrowed cervical canal, the possibility further of natural menstruation, and even of natural pregnancy occurring, while a dead fœtus is in another part of the uterus, are all cleared up by this view. I believed my patient mistaken when she said she menstruated, but now I understand she spoke the truth. I believed also I was mistaken in thinking I catheterized a uterine cavity measuring 2½ inches, but now I know I was correct.

It is to be noted, in support of this view, that in Dr M'Lintock and in Barnes's cases, as well as in Menzies's, and I have no doubt in others, the dilatation of the internal os uteri presented very unusual and unlooked for difficulty—in fact, appears in these cases to have been impossible with ordinary means.

All this is made easy the moment we allow that these obstetricians had to deal with a pregnancy in a subsidiary horn presenting a defectively developed communication with the common cervix; and we have thus a rational account to give of the difficulties experienced, without going to what seems to me the unwarrantable supposition that these experienced observers were deceived in regarding the fœtal parts as contained in a sac formed by the pregnant uterus.

An explanation of the greater readiness with which the uterus may cease to act in such pregnancies is, I think, suggested by examining the diagrammatic view here presented of the uterine tissue. In ordinary circumstances the fundus is thicker and more powerful than the lower segment of the uterine body. In ours, as in Litzmann's case, the reverse is the truth. The walls are very powerful round the lower pole of the fœtal sac, and become gradually weaker as we approach the upper pole. Uniform contraction of the uterus, under ordinary circumstances, is followed by a dragging up of. the lower segment of the uterus towards the more powerful fundal segment, and thus dilatation of the upper pole of the cervix is facilitated. But uniform contraction of a muscular sac, such as the one before us, would be followed by pulling of the fundal zone downwards towards the more powerful cervical zone, whilst the same preponderance of tissue would tend to shut the internal os more and more tightly instead of facilitating its dilatation. In this way it seems tolerably clear that the weak fundal zone would be very apt to get soon exhausted and to cease acting much more readily than in a normally developed uterus. This view is further supported by the fact of experience, that when bicornual pregnancies burst it is in the situation of the upper part of the sac.

The greater tendency to decomposition in the flexor aspects of the fœtus is explained by Litzmann by the greater and ever increasing tension which this aspect undergoes while the sac is gradually contracting. In this view I agree with him. It is markedly present in Turner's case, as also in Litzmann's and in mine. It was also noticed by Litzmann in a case of abdominal pregnancy.

Diagnosis.—In my case the great length of time after the death of the fœtus leading to involution of the cervix, the absence of discharge of a bad-smelling character, and the regular recurrence of menstruation, with the possibility of catheterizing a uterus of normal size, combined with the imperfect history and some inexcusable neglect on my part, led to an erroneous conclusion. This was further facilitated by the fact that the part pressing against the lower uterine segment was the breech and not the head, which gave no feeling of bones or sutures, and felt exactly like a fibroid. Still, I frankly allow that a little care in inquiring into the history would have suggested the possibility of pregnancy, or rather the probability. Further than that we could not have gone on the merits. The fact of what was called by the doctor in attendance a conception having passed further complicated matters, and made the case more obscure. It must have been the decidual membrane from the unimpregnated horn, but might also have been the conclusion of the pregnancy. As to the diagnosis in general of the bicornual condition, the possibility, as in Salin's case, of finding a uterus empty, ought to suggest either bicornual or abdominal pregnancy when the fœtus is carried to the full time. The presence of free lateral mobility would, I think, make nearly certain of a pregnancy in a bifurcated uterus; for we well know that an abdominal pregnancy being situated in a sac formed from inflammatory exudation must necessarily be pretty firmly fixed. It is only the abdominal, of the various extrauterine forms of gestation, that can go on to or near the full time. The obliquity of the tumour is also of considerable importance, as from their anatomical conditions the horns of a bifurcated uterus are inclined at a considerable angle to one another and to the mesial line; consequently, as one or other develops in its own axis, the direction of the resulting tumour must always be oblique.

Thus, to collect the most important diagnostic consideration, the history of a pregnancy advancing to full time before the death of the fœtus, with failure of the uterine efforts to complete the delivery, no demonstrable obstetrical obstruction being present, ought to suggest the possibility of a pregnancy in a bifurcated uterus.

The presence of marked obliquity in the abdominal tumour, free lateral movement in the same, the history of a previous pregnancy or pregnancies natural and at full time, ought to strengthen the opinion. If, moreover, menstruation goes on regularly notwithstanding that an apparently "missed labour" has occurred, this fact confirms the opinion, and ought to set the obstetrician to work by abdominal, vaginal, or anal examination to determine the position and condition of the other horn. That being determined leads us to the question of

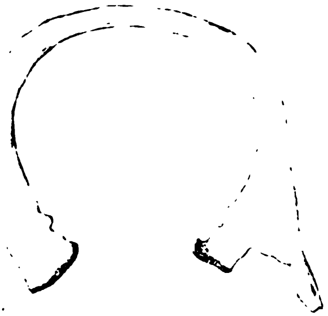
Treatment.—This I hold should be laparotomy, not only for those cases that are diagnosed as pregnancy in a subsidiary horn, but for those that, in the present position of opinion, are usually called "missed labour." As I have already pointed out, I regard all, or nearly all, the cases of so-called missed labour to have been cases of pregnancy in a subsidiary horn of a bifurcated uterus. Nothing else to my mind can account for all the conditions, but it can. If we consider the fearful mortality of so-called "missed labour," we shall have no difficulty, I think, in reconciling ourselves to this mode of treatment.

Laparotomy with simple removal of the entire unopened sac, as in my case, is suitable for those cases when, after many months or even years, the containing sac has shrunk so far as to make this practicable. But for the more recent cases, it seems to me that to facilitate the delivery the opening of the sac and removal of its contents previously to the permanent ligature of the pedicle may be advisable on technical grounds, that is the employment of either the Porro or Porro-Müller method.

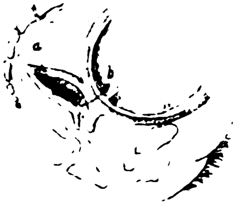
The only other admissible treatment of such a case as mine would be to let it alone. But when we consider the very advanced state of destruction in which the membranes and parts of the fœtus were found, and collate that fact with the disastrous histories of most of the cases of so-called missed labour, the prudent obstetrician will, I feel satisfied, give the weight of his opinion in favour of early operation, so as to avoid the risks of putrescence of the contents of the sac and consequent blood poisoning, or those of ulcerative perforation of the sac, the dangers connected with which are known to be very great. If Litzmann's case had been operated upon sooner, there is every reason to believe that all would have gone well, as the patient, to judge from the record of the sectio, manifestly did not die of the operation, but of the infection of her system before it was attempted. Salin's case did excellently, so apparently has an as yet unrecorded case of Sänger's. Mine could not have done better. In such an operation a mortality of 1 in 4 is certainly not large.

It is to be remembered that as the placenta is included in the tumour to be removed, one of the greatest risks attendant upon operation for extrauterine pregnancy is non-existent when we deal operatively with pregnancy in a subsidiary horn of a bifurcated uterus. Besides, the principle urged here is in accordance with the universal axiom of midwifery, viz., that by all means a patient whose labour comes on at full term must be delivered—as safely as practicable—but she must never be left undelivered.

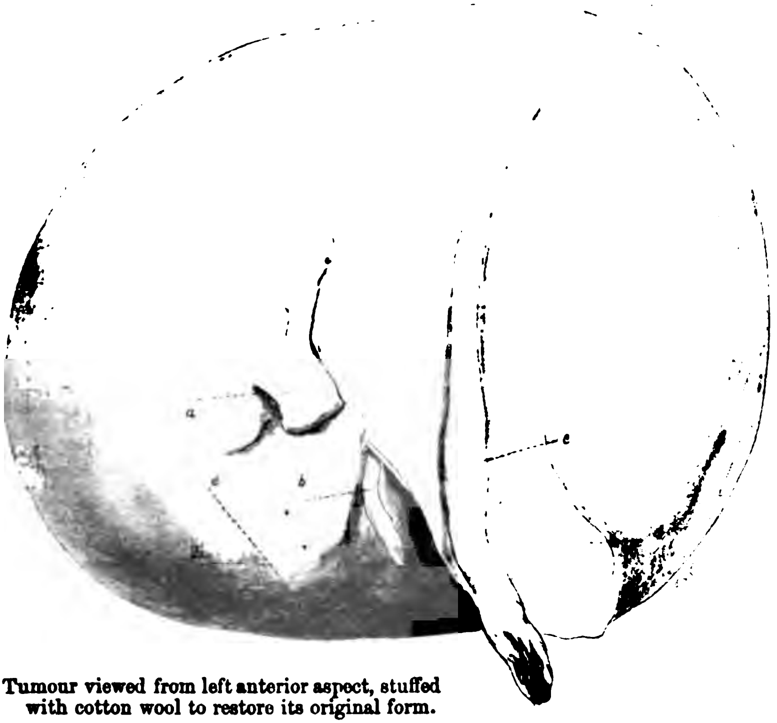
Before concluding I would beg to express my deep obligations to Dr Caird for the accompanying drawings in illustration of the paper.



Diagrammatic section through Uterus, to show the Left Tube, etc., the wall thickened below, but thin above.



After Litzmann.
Empty horn, *a*.
Pregnant horn, *b*.
Communication in line of the arrow.



Tumour viewed from left anterior aspect, stuffed with cotton wool to restore its original form.

a. Left round ligament. *b.* Blood-vessel.
c. Left Fallopian tube. *d.* Left ovary.
e. Line of separation of tumour from pedicle.

DR. ANGUS MACDONALD'S CASE OF PREGNANCY IN LEFT HORN OF A BIFURCATED UTERUS.

Bartholomew, Edin r

Addendum.—Since writing the above, I find I have overlooked the following references in which the same idea as I have endeavoured to bring out in the paper is indicated.

"After Oldham, these prolonged pregnancies with a dead fœtus are called *missed labour* (most probably in these cases there has occurred a confusion with fœtuses retained in extrauterine subsidiary horn pregnancies)."[1]

"I entertain little doubt that some cases of presumed *missed uterine labour*, a part of whose history is the subsequent discharge of fœtal bones by the os uteri and vagina, were cases of interstitial gestation, or of gestation in one horn of a two-horned uterus."[2]

II.—THE POSITION OF THE MEDICAL PROFESSION IN REGARD TO CERTIFICATES OF MENTAL UNSOUNDNESS AND CIVIL INCAPACITY.

By T. S. Clouston, M.D., F.R.C.P. Ed.

(*Read before the Medico-Chirurgical Society of Edinburgh, 4th March* 1885.)

From the earliest Greek times we have evidence that physicians have been called in to treat mental diseases in all civilized countries, but it is only in comparatively recent years that our profession has, in law and practice, been made the virtual judge as to what constitutes unsoundness of mind and incapacity for civil affairs.

It does not appear that in ancient Rome any formal proceedings were required for placing an insane person under suitable treatment, but for the appointment of tutors and curators for the *furiosi* and *mente capti* there were written laws and a formal procedure. Dr Sibbald says, "Careful provision was made for the treatment of the Roman citizen when he became insane." "The Romans looked on this condition as a disease which was to be cured, if at all, by ordinary medical treatment," but, "the evidence upon which a Roman magistrate declared a person to be furious was not the opinion of experts, but such evidence as showed *that the fact was admitted by the general voice of those to whom the circumstances of the case were well known.*"[3] That statement applies as a description of legal practice in appointing a guardian to an insane person and his property for at least 1500 years. The first recorded instance we have of medical knowledge being rendered available in a formal way to enable a court of law to come to a decision in regard to the existence of mental disease was when, in 1589,[4] fourteen persons condemned to death for witchcraft appealed against the judgment to the Parliament of Paris, which named four commissioners—Pierre Pigray, the king's surgeon, and Messieurs Lerois, Renard, and Falaiseau, the king's physicians—to visit and examine these witches, and see whether they had "the mark of the devil upon them." The mode of diagnosis adopted by these gentlemen was this—"The visit was made in presence of two counsellors of the Court. The witches were all stripped naked, and the physicians examined their bodies very diligently, pricking them in all the marks they could find, to see whether they were insensible to pain, which was always considered a certain proof of guilt. They were, however, very sensible of the pricking, and some of them called out very lustily when the pins were driven into them." "We found them," continues Pigray, "to be very poor stupid people, and some of them insane. Our opinion was that they stood more in need of medicine than punishment, and so we reported to the Parliament, which, after mature counsel among all the members, ordered the poor creatures to be sent to their homes without inflicting any punishment upon them." In all respects, except their method of diagnosis, Pigray and his colleagues were to be congratulated. They stood, then, as our profession has almost uniformly done of late years, on common sense and scientific ground, disregarding the stereotyped legal views of the time, which largely reflected the popular opinions and the superstitious theories of the Church. Most of us think that this mode of formally calling to its assistance medical knowledge by the Parliament of Paris was a better method of arriving at the truth than the present British and American method of allowing each side to call in its own skilled evidence as to whether a man is to be adjudicated of unsound mind or not.

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[1] *Kleinwächter Grundriss der Geburtshülfe*, s. 190, Wien, 1877.

[2] Barnes's *Diseases of Women*, 2nd edition, p. 368, London, 1878.

[3] Dr Sibbald, *Morison Lectures on Insanity*, *Journal of Mental Science*, July 1877.

[4] *Ibid.*, October 1877.

In England the first Act of Parliament relating to the insane was that of 17 Edward II. in 1324, and the first in Scotland was of Robert II. in 1371. The object of both of these was to provide that the king should have the custody of the lands of idiots and insane persons during their lives, rendering the same after their death to the right heirs. But there was no provision in those Acts, or in any subsequent lunacy statutes, for medical certificates or medical evidence to prove unsoundness of mind or civil incapacity, till the English Act of 1774 for the regulation of private madhouses (14 Geo. III. c. 49) made a medical certificate, in addition to the order of a relation, requisite for the admission of every private patient to those institutions. Paupers were by that Act to be sent to such places as received them on the authority of the parish officers alone. Thus it is just 110 years ago since the adoption of that system of medical certification of unsoundness of mind, which is now universally prevalent in the three kingdoms. Every statute relating to the placing of the insane in asylums or under private care, passed since that time, makes special provision for either one or two medical certificates in the case of every patient, private or pauper.

In England and Scotland the medical certificates required by the earlier statutes were not required to embody all or any of the facts on which the opinion was founded. The English Lunacy Act of 1845 for the first time made it an essential part of a lunacy certificate that it should contain specific facts indicating insanity observed by the medical man who signs it. Other facts indicating insanity communicated by others were provided for, but were not reckoned an essential part of the certificate, and can be put in or not at the discretion of the signer. The origin of this form of medical certificate, containing the chief facts on which the opinion was founded, was the English form of affidavit usually made by a medical man, or indeed any other witness, in regard to the lunacy of a person with property to be looked after, whose state of mind was being inquired into, previous to the issuing of a writ *de lunatico inquirendo* by the Lord Chancellor. Such affidavits always contained facts proving unsoundness of mind and incapacity for the management of property, duly sworn to, and were submitted to the Lord Chancellor as *prima facie* evidence of the insanity of the party, so that he might have proper grounds for issuing the writ for a formal inquiry. This inquiry is now always made by a Master in Lunacy or one of the Lords Justices. The lunacy certificates of England and Scotland, now required before a patient is placed in an asylum or elsewhere under treatment, are in form just a compressed and simple affidavit of such unsoundness of mind as requires care and treatment. All such lunacy certificates must be in the exact form prescribed in the schedules attached to the English Act of 1853 and the Scotch of 1857. In this absolute uniformity they differ from all the other medical certificates or affidavits required by the Lord Chancellor or Lords Justices, or by the various Acts relating to criminal lunatics or bankrupts, or those relating to persons of unsound and weak mind requiring judicial factors in Scotland.

The ancient and constitutional method of inquiring into the mental condition of a person with property, supposed to be incapable of managing it on account of unsoundness or weakness of mind, with a view of protecting that property, was and is practically the same in England and Scotland. It proceeded on the theory that the king had, as his prerogative, the custody of the lands of such persons. Before such prerogative was exercised a formal inquiry as to the civil incapacity of the supposed lunatic or idiot had to be made in England by a jury of 12 men. If he was found to be *non compos*, a person was appointed to take charge of his property, who is called in England his "Committee of the Estate," and in Scotland his Tutor. The process itself is called a Commission in England, and a Cognition in Scotland. In England this is still the ordinary process under which the means of the insane and idiotic who have property are taken charge of and used for their benefit, their persons being controlled and protected under the same process by another person, who is called the "Committee of the Person." In Scotland the ancient process of cognition has gone almost out of use. It is a curious fact, and one strikingly showing how hard it is to get modern ideas embodied in some kinds of legislation, that though in England there have been at least fourteen Acts of Parliament passed relating to commissions, and at least five in regard to cognitions in Scotland, there is not a word in one of these Acts, from the first in 1324 to the last in 1868, about calling in the skilled evidence of medical men before the decision is arrived at by the proof, or in the preliminary inquiry. And this in spite of the fact that for at least the whole of this century the actual practice has been for medical evidence to be required at every commission in England and every cognition in Scotland. The Lord Chancellor never issues a writ *de lunatico* except on medical affidavits; the Masters in Lunacy who, on behalf of the Chancellor, hold the commission, never find a person insane except on medical testimony; and no commission is ever superseded, and the patient restored to the control of his affairs, except on medical evidence. In Scotland no cognition now ever takes place without medical evidence being required. Illogically enough the Lunacy Regulation Acts of 1853 and 1862, which embody the present law of England in regard to commissions in lunacy, make elaborate provision for the medical visitation, supervision, and control of the Chancery lunatics after they have been adjudged to be of unsound mind.

The Scotch process of appointing a *curator bonis* or judicial factor to manage the property of those who are incapable of doing so themselves, from mental unsoundness or mental weakness, as described in *Thoms on Judicial Factors*, is now the one in common use here. It has practically superseded the process of cognition. It can only be carried out on the production to a judge of Session, or to a sheriff if the property is small, of two medical certificates of the mental unsoundness and civil incapacity of the party for whom a curator is required, as the basis of the process. The necessity for medical evidence is a statutory provision in the appointment of a *curator bonis*, and not merely required by prescription, as in the processes of commission and cognition. The medical certificates required need not be drawn up in any set form. Like all statutory medical certificates in Scotland, they must be "on soul and conscience." The whole process is an admirable one in nineteen out of twenty cases, both for the insane and for their relatives. It is simple, implies no undue publicity, is cheap, and is easily set aside when the patient recovers. Its weak points are that it makes no provision for the custody of the person of the lunatic or idiot, and that the process of further inquiry is a clumsy and uncertain one if opposition is made by the party or by any one on his behalf. Those defects ought, in my opinion, to be remedied in future legislation.

The English Act of 1774 recognised the scientific fact that insanity is a disease, not only by requiring the medical certificates referred to, but also by providing that five Fellows of the College of Physicians, London, should be annually elected Commissioners in Lunacy for granting licenses to private asylums in Middlesex, which licensed houses those commissioners were to visit every year. The Scotch Act of 1815 recognised the same fact, by providing that the sheriff in his prescribed visits to asylums should be accompanied by a medical man, who in Midlothian and Lanark had to be one of four resident Fellows of the College of Physicians or the Glasgow Faculty respectively. These four Fellows of these colleges had also the power of independent visitation and inspection of the asylums, apart from the sheriff, in those counties.

The same fact was much more fully and clearly recognised throughout the great English Lunacy Acts of 1845 and 1853, both of which were the work of Lord Shaftesbury, and in the Scotch Act of 1857, introduced by Lord Moncreiff, which now with their amendments regulate the treatment of the insane in the two countries. The first of these provide that three of the six Commissioners in Lunacy are to be medical men, this having been secured by the energetic action in the House of Commons of Mr Wakeley of the *Lancet*, and the last (the Scotch Act) that the two paid commissioners and the two deputy-commissioners are to be of our profession. All the certificates of insanity for placing patients under treatment must, therefore, under the present law not only be signed by medical men, but when acted on, must be submitted to other medical men, who, as Commissioners in Lunacy, have the power in England at least of saying whether they are valid or not.

All the numerous criminal lunacy Acts provide for medical certificates as to the mental condition of persons charged with crimes, or under sentence, who present symptoms of insanity, before any steps can be taken with regard to them. The English Act of 27 & 28 Vict., cap. xxix. sect. 11, in this way gives our profession virtual power in a life and death question, when it provides that if there is good reason to believe a prisoner under sentence of death is insane, the Home Secretary "*shall* appoint two or more physicians or surgeons to inquire into the insanity of such prisoner," and if they certify in writing that he is insane, the Home Secretary has no choice, but "*shall* direct by warrant under his hand" that the death sentence be not executed on the murderer, who must instead be removed to a criminal lunatic asylum. If he recovers there, the death sentence may then be carried out, but I need hardly say that no criminal lunatic was ever thus executed after his restoration to sanity.

There were in the United Kingdom 104,257 persons under certificate as insane at the beginning of 1884. For those 123,064 medical certificates had been required, or an average of about 6 certificates given by each practising member of our profession, and in each case a certificate as to mental condition has to be given and sent to the Commissioners by the physicians of the institutions in which the patients are placed after their admission. The new cases of lunacy in Scotland for 1883 amounted to 2607, and as each of these required two certificates, this amounts to a yearly creation for this purpose of 5214 new lunacy certificates, or over two to each Scotch practitioner yearly. To detain a patient in a Scotch asylum after the first three years, he must again be certified by the physician at the end of every year. And every one of the patients who recover every year must be discharged by medical authority, a formal judicial procedure being required along with certificates in the case of those civilly incapacitated by commission or under curatory. To this enormous amount of medical certification we must add the medical certificates granted for the appointment of judicial factors, the affidavits for the issuing of writs *de lunatico*, those needed for the criminal lunatics, for the transference of patients from one asylum to another, for the sick and friendly societies, the more informal certificates to employers, and the casual certification for all sorts of purposes. Still further to complete the facts which show the extent of the present responsibility of our profession in regard to the unsoundness and the soundness of mind of the country, we must take into account the 500 medical men who hold official appointments as commissioners, visitors, inspectors, medical superintendents, assistant medical officers, and consulting medical officers of asylums.

Thus, within a century, have those new and most important duties and high responsibilities been gradually devolved by the Legislature and by judicial procedure on our profession in regard to mental unsoundness with its resulting incapacity to manage property. We have become the virtual judges of every question in regard to insanity, quite apart from and above its treatment as a disease. We control the liberty of the subject *quoad* insanity. It is through us alone that a man can be deprived of all his civil rights and position, the enjoyment of his property, the society of his wife, the control of his children on this account, and through us he is restored back to his position in life again. Our power is none the less real nor our responsibilities less heavy that the technical "order" or "decision" for a man's being deprived of liberty or civil rights is in Scotland one given by a magistrate. If the magistrate cannot act except on our certificates, and cannot virtually refuse to act if our certificates are valid and uncontradicted, we are the real power at his back. As a matter of fact, the medical profession have not sought those great powers in regard to unsoundness of mind. Many distinguished men have strongly set themselves to stem the tendency to give us such power. Lord Westbury, reckoned one of the ablest judges of his time, said, when Lord Chancellor, that "the introduction of medical opinions and medical theories into this subject has proceeded upon the vicious principle of considering insanity as a disease; whereas the law regards it as a fact, which can be ascertained in like manner as any other fact." Such protests have been utterly unavailing to affect recent legislation or procedure. Scientific fact has carried the day.

I am not aware that our authorized representatives were even consulted when the Legislature at those various times devolved on us these duties. I shall presently allude to the question whether we can evade or decline them. As it is, we as a profession have up to this time virtually accepted them. I am not at all sure, however, whether we have fully realized our position in regard to this matter. I doubt whether we have looked the thing fairly in the face, satisfying ourselves as to the principles of our position and our action, weighing our responsibilities, and calculating the risks we run. There are times when, in regard to such important questions, principles have to be inquired into, new departures made, and standing ground looked to. We are in the position of a man who has, without asking for it, gradually got into his hands the management of a whole department of State. While things worked smoothly and in a routine way he never asked himself any questions about why he came to be there. He simply did his duty to the best of his knowledge and ability. But when a crisis came, and things began to go wrong, and people said to him, "What business have you to do what you are doing?" he, if a wise man, sets himself to consider his position. It seems to me the medical profession has just now come to such a halting and considering time in its medico-legal position with regard to certifying insanity. Judges from the bench are describing the present lunacy laws and procedure as "shocking" and full of danger to the liberty of the subject. Juries are mulcting medical men heavily in damages for signing statutory certificates of insanity. The press cries out that something is wrong, uttering discordant and contradictory views, but still showing an uneasy feeling. The medical papers assure the profession that things are wrong, and must be put right. Questions and debates in both Houses of Parliament exhibit the combined ignorance and zeal of our legislators, and finally the Government promises a bill to put things to rights.

I hold most strongly that in regard to certain aspects of future lunacy legislation the medical profession is entitled to have a direct and controlling voice. That would simply be recognising the scientific fact that it is a disease. Though in Scotland we are not so dissatisfied with our lunacy laws and lunacy arrangements as they are in the South, and have not been subject to such periodic lunacy scares as have occurred there, especially among London journalists hard up for topics that will excite the public, yet it behoves us carefully to consider the matter, and know our own minds in regard to it. If legislation is carried out for England, the same principles will soon no doubt be applied here. If we are wise, and mean to make our influence felt, it will not do for our medical corporations and our universities to show apathy or ignorance when a bill affecting a widespread disease, and the relationship of the profession to that disease, is passing through Parliament. To speak plainly, the lawyers have been able to shape former lunacy bills too much according to their views of mental unsoundness and civil incapacity, through the apathy of medicine. We hold the key of the position if we have the wit to use it. There are other bills than those about medical reform, infectious diseases, and vivisection, that we ought to be interested in. That disease of the brain, whose chief manifestation is derangement of man's reason, is surely one of these.

If the position of the profession in relation to mental disease has grown so vastly of late years, there can be no reason to question that it will continue to grow in the future. The advance of cerebral physiology and pathology is leading to advances in the early treatment of mental diseases by the family practitioner. There was a time when the mild forms of the disease were scarcely treated at all. As we all know, such treatment requires certain special arrangements that the treatment of no other disease requires. Mental nursing necessarily implies restrictions on the patient's power of action. It often implies the use of force to overcome resistance. To be effectual it constantly implies removal of the patient from his own house against his will. It may imply the forcible administration of food or medicines. To cure the disease, in short, the doctor needs to control the whole circumstances of the patient, irrespective of the patient's will. I am not now referring to the sending of patients to asylums and the treatment that may be adopted there, but to home and private house treatment by family physicians under the sanction of relations. Now, in regard to all this the profession is entitled to take the broad ground, that whatever is needed for a patient medically for his cure should be legal and unrestricted by any vexatious statutory provisions whatever, and should imply no undue risk to the doctor. We are already much better off in this respect in Scotland than they are in England, in having a provision of our law that for six months, with a view to recovery, a patient may be treated anywhere the doctor and the relatives think best, without any legal formality or word of technical insanity whatever, except a private letter of intimation to the Commissioners, if he be treated from home and his board paid for.[1] If treated at home, or in a house or lodgings paid for by him or his friends, no such intimation even is needed till after twelve months.[2] We must see that our present Scotch liberties in this respect are not interfered with by future legislation.

When a patient has to be formally committed for treatment to a hospital for the insane, his personal liberty is necessarily interfered with by strangers not acting like a private nurse under the direct orders of his relations. Therefore it seems to me that for this some such system of formal medical certificates as the present must be continued. The only question is—Who is to give them? I am in favour of the present system of the whole profession retaining the power of granting such certificates instead of deputing it to special Government-paid officials. I do not even approve of one of the two certificates being granted by such an official; for if the family doctor had granted the first certificate in any case, and the Government official refused to grant the second, the former would be in a very unpleasant and dangerous position indeed. I contend, however, that the medical man who certifies a case of insanity should be in exactly the same position as a witness who has been summoned to a Court and gives evidence there in answer to questions asked. If he does not say what he knows to be untrue, and if he has no *mala fides*, the witness is protected by the Court from any consequences that may arise from his testimony. So should the doctor be in giving a truthful lunacy certificate.

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[1] 20 & 21 Vict., cap. lxxi. sect. 41.

[2] *Ibid.*, sect. 43.

Then arises the question—If two medical certificates in statutory form are given in regard to any case, is the sheriff to judge of the sufficiency of the facts indicating insanity contained in them, and grant or refuse the "Order" to receive the patient into the asylum, according as he thinks those facts sufficient or insufficient? At present different sheriffs act on different principles in regard to this vital matter. One acts judicially, another ministerially. I have known a sheriff refuse to grant an order because it was stated in one of the certificates (both of which contained abundant facts indicating insanity) that the woman had been confined the day before. Being a kind-hearted man, he thought it shocking to send any woman to an asylum the day after her confinement; and being the judge in the case, and there being no appeal, though there was imminent risk of the insane mother strangling her baby and jumping out of the window with not a soul to look after her, those risks had to be run. And I have received an order from another sheriff for the admission of a patient, when one of the certificates under "Facts indicating insanity observed by myself," stated, "I could discover no fact indicating insanity." There being an express clause in the Act absolutely prohibiting any patient being received into an asylum except on certificates containing facts indicating insanity observed by the certifier, I considered I could not admit the patient, notwithstanding the sheriff's order, and refused to do so. It is notorious that sheriffs, or rather the sheriff-clerks, do not see that the formal legal portion in the first parts of the certificate before "Facts indicating insanity observed by myself" is correctly filled in, which is just the part they ought specially to see to, in my opinion. In England a certificate is not valid except the certifier's exact medical qualification is put in. This is constantly omitted here, and yet the sheriffs sign the order. There is a formal English decision that if the patient is not designated and his residence put in, the certificate is invalid and worthless. It is quite the exception for me to get a certificate where the patient is designated, except one signed by an old student of mine, who had remembered my drillings on this point.

There are two opinions given and certified to in every certificate. One is that the patient is "a lunatic," or "an insane person," or "an idiot," or "a person of unsound mind" (and, by the way, those expressions become in this way the statutory definition of legal lunacy); the other is that the patient is "a proper person to be detained under care and treatment." Both things should be taken into account by the doctor, each separately and distinctly from the other, before he signs. If we grant that the sheriff can judge of the sufficiency of the facts to prove the first, that of "unsoundness of mind," it is quite certain he is not in a position to judge as to second, viz., whether the patient is "a proper person to be detained under care and treatment." That is a medical question, which a medical man alone can solve, and one in which the law gives him no help whatever.

If one is to adopt the method of interpreting the meaning of a document from its contents alone, then the sheriff's order bears no proof within it that the sheriff has considered the facts in the certificates, or is satisfied with them. It simply says that "having had produced" to him a petition and certificates, he authorizes the transmission and reception of the patient.

I therefore conclude that the sheriff does not act judicially in granting orders for the reception of patients into asylums. He is merely bound to see that a petition, statement, and medical certificates are there in due form, and accurately filled in. His position ought to be defined in the next bill we have. I do not think he is properly qualified to say whether the "facts indicating insanity" do indicate it or not, that being a medical question, just as is the question of suitability for care and treatment. But what is the good of the sheriff's order in that case? It is "a mere farce," say some of our English brethren, "pretending to be what it is not, and taking the proper responsibility off the petitioner and medical men." I dissent from this very emphatically. I look on the provision for inserting "facts indicating insanity" as one affecting the doctor, to compel him to formulate the grounds for his opinion, and not one with which the sheriff has judicial concern. Before the present Scotch Act came into operation the medical certificates contained no "facts;" and yet, on the medical opinion that the patients were insane and should be admitted into asylums, the sheriffs granted orders for that purpose. No "facts" are required in the medical certificates for a man being deprived of the control of his property and a *curator bonis* appointed for him by a Lord of Session, and no "facts" are stated when the Secretary of State respites a man from the death sentence on account of insanity. The sheriff's order is most important, apart from its being a judicial decision as to the insanity of the patient. It secures that personal liberty is not interfered with *quoad* lunacy, except on a magistrate's authority, that the papers are in statutory form, that everything is *bona fide*, and that the medical men who sign are on the Medical Register. It secures that amount of publicity in the whole transaction which is needed to give the public confidence in the working of the laws.

But while that is my opinion in regard to the sheriff's non-competency to review and judge as to the "facts" stated in the medical certificates, I am not to be taken as implying that therefore those facts are unimportant, or should be carelessly dealt with by men in signing their lunacy certificates. On the contrary, I would put them on higher ground than that they should be merely sufficient to "pass the sheriff." I would urge on my professional brethren that they should be sufficient to satisfy the more accurate demands of science. I would say that each case should be so carefully examined into, and the reasons for coming to the decision to certify the patient so clearly arrived at in one's own mind, that the writing down of the "facts" would be a mere formulation of the most important reasons for the conclusion already come to. "Is the patient insane?" "What evidence is there?" "What kind of insanity does he labour under?" "Is he a proper person to be detained under care and treatment?" "Why should he be so detained?" If one is able to answer these questions clearly in one's own mind, there is usually little difficulty in filling in the "facts." I would say that the chief things which require asylum treatment and imply medical certificates are danger to the patient or others without proper means of obviating such danger, disturbance of the public peace, offences against public decency, the necessity for care and treatment which cannot otherwise be got, the presence of such symptoms as can only be properly treated in a hospital for the insane, the failure of treatment otherwise, and the deliberate medical opinion that hospital treatment is best for the patient. As we all know, all sorts of considerations—social, monetary, and domestic—must be taken into account in deciding the question.

When the certificate is being prepared, we certainly cannot do so too carefully: one should look at the directions on the margin in each case, and read over every certificate before it leaves one's hands. To get "facts" to put down, one should first think of the marked insane delusions, then of incoherence of speech, then of suicidal or dangerous occurrences, then of shouting or outrageous conduct, then of incapacity to understand questions or to answer them sensibly, then of insane reasons assigned for conduct, then of changes from the natural character and conduct, then of abnormalities of appearance, facial expression or manner; then of negative signs, such as taciturnity and insensibility to impressions. Quote the patient's words, if possible. If we put our facts down in a pithy, dogmatic way, using definite but non-professional expressions, and if the process of diagnosis with subsequent certification is founded on a fair knowledge of mental disease, I do not think we run much risk in signing certificates even in the present state of the law in Scotland.

I ought to have premised that before any medical certificate of insanity is signed under any circumstances, the necessity for it must be fully recognised by the patient's relations. They must, in fact, ask us to certify. In this a certificate differs from a medical prescription essentially in principle. After we are called in to a case, we do not ask whether we shall give strychnine or not, if we think the patient needs it. There are few circumstances where I should even press the relations of an insane patient to come to a conclusion about having him certified. They should be fully satisfied, and should initiate any action taken. Our duty is to state the risks involved, legal and social, the benefits to be derived from treatment under certificates, and our medical reasons so far as we can explain them. The position of a medical man in thus being requested and authorized to sign a medical certificate by a responsible relative or public authority undoubtedly entitles him to exemption from the risks that he would run if he initiated the process. He only, in fact, makes a formal statement of a medical opinion, founded on medical observation, and his reasons for it.

And now we come to the consideration of the question—What are the risks to a medical man who signs a good medical certificate of insanity after the sheriff has granted the order? There are risks undoubtedly, but not many in Scotland. Since our Lunacy Act of 1857 passed, there have been over 46,000 certificates signed, and as yet no medical man has been brought into Court for a certificate of lunacy. Considering that any man in this country may bring an action against any other man for almost anything real or imaginary, this immunity on the part of our profession in regard to a proceeding of such importance, and one which is apt to cause such irritation as the making a man legally into "a lunatic," is very remarkable. But can we avoid any risk whatever? I cannot see how we can do so. There are a few difficult cases where the necessity for certification may be so great, and yet the risk so apparent, that it is quite right to ask for a letter of indemnification against pecuniary loss from legal proceedings from the person who asks for the certificate. But I confess this is a proceeding that does not look well on the face of it, for it seems as if we were doubtful about the propriety of granting the certificate, and I only advise it in very exceptional and rare cases. In the case of pauper patients, it could scarcely be got. Yet an action brought against a parochial medical officer, who receives no special remuneration for his medical certificates, and no protection from the parish against loss from legal proceedings, is a possibility, and would be an especially hard thing. I am of opinion that this duty is of so responsible and onerous a nature that its remuneration should never be included in ordinary parochial work, but that a special fixed salary should be attached to it. A perfunctory and careless mode of doing it is encouraged, and its importance not realized, if it is not paid for. I am sorry to say that the parochial boards of our larger towns are especially pennywise in this respect. It is not so in England. I think our General Lunacy Board and our medical corporations should make a representation to the Board of Supervision on this point.

It is in the case of the patients whose insanity is obscure, those whose power of self-control is great, those with only partial insanity, those whose insanity consists in foolish actions while their reasoning power is acute and their speech coherent, those in whom the mental unsoundness consists mostly in moral perversion, and those who labour under that form of insanity from drinking in which all the symptoms pass off quickly after being put under treatment,—it is signing certificates in the case of such persons where special precautions have to be taken and special risk is run. There are some people of means, too, whose dispositions have been so litigious, that they need to be very insane before any man will venture to sign lunacy certificates for them, and there are others with semi-insane suspicious relations in the same position. To meet exceptional cases, and place such persons under treatment, to save them from ruin, and to save their relations from manifold annoyances, I think there should be provided a formal process, by trial before a Court, similar to the process of cognition, but applicable for the object of placing of patient under treatment, cognition being only applicable at present where there is property to protect. Such a process would only be making lunacy laws conformable to the facts of disease. It is in some such cases that we, as a profession, are at present justified in absolutely declining to sign the ordinary statutory certificates. If such patients are dangerous or very threatening, the present Scotch procedure for placing dangerous lunatics under custody at the instance of the procurator-fiscal is the proper remedy. Many a suffering wife and relation, whose lives are constantly in danger from alcoholic maniacs, would do wisely to resort to this. The question of the patient's mental unsoundness and dangerous tendencies is then tried in open Court according to law. And no one runs any risk, or incurs any responsibility, but simply gives evidence in Court when called on to do so. I have had several patients under my care, where endless trouble was saved through their having been "fiscal cases." The publicity of such proceedings is disagreeable at the time, but it may save from worse things.

It has been proposed that very soon after a patient is sent into an asylum some Government official should see him, examine the papers, and if satisfied, should sign an "Order" which would then be the permanent authority for his detention, thus taking all responsibility and risk after that off the persons who placed him there. I cannot see that this would be any improvement on the present procedure, which consists in the physician of the asylum sending a certificate to the Commissioners in Lunacy with the form of mental disorder within a week after admission in England, and within a fortnight in Scotland, and the subsequent visits of the Commissioners. The asylum physician thereby homologates the certificates and shares the risks of legal procedure, the cost of which in his case would be paid by the institution if he acted legally and *bona fide*. It is better to have an institution sued than an individual. No examination by an official would exempt from the risk of action for sending a patient to the asylum; and if by possibility the proposed official, not being able in the course of his one visit to make out the patient's insanity, and not having, like the physician to the asylum, who gives the certificate at present, the opportunity of seeing him on admission and every day after admission, if he should not be able to give his *imprimatur*, then the risk to the certifying medical men would be great indeed, for they would be virtually convicted of a wrong diagnosis by the man appointed to protect them from risk. At present no action can be brought against a medical man in Scotland for a certificate after twelve months from the time the patient has left the asylum,[1] so that the prolonged annoyance and expenses suffered by the medical men in the MacIntosh *v.* Smith and Lowe case could not occur under the present statutes.

If I had the shaping of future legislation, I should institute a provision that under certain exceptional circumstances even patients in asylums, who could show good cause to the Commissioners in Lunacy, should have the chance of a public formal inquiry for settling the question of their mental condition in a definite way once for all. We have patients who, having laboured under acute symptoms on admission, become partially recovered chronic grumblers, with the grievance that they are confined because they cannot get a fair open hearing or examination. Such a provision would satisfy that inherent sense of fair-play and justice which is seldom lost in the insane; and it would also satisfy some of the public better even than the Commissioners' visitation or calling in two independent medical men, as provided for by the Scotch law. The publicity involved in such inquiries is no greater than that involved in being insane, for whose friends and neighbours do not know all about a man's mental troubles? And if it were somewhat greater, it should be faced to avoid still worse evils. It is an enormous gain to make all lunacy proceedings above board, and to correct by law the natural but false shame that tends to concealment of everything connected with unsoundness of mind in a family. Our sheriffs' orders have done us much good in Scotland in that respect.

A very strong position in regard to unsoundness of mind has for some time been taken up by the *Lancet*, the oldest and not the

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[1] 29 & 31 Vict. cap. li. sect. 24.

least influential of the weekly medical press. It is shortly this. "Our lunacy laws are utterly and radically bad. Our lunacy policy is wrong. The Commissioners in Lunacy are very inefficient. The position of medical men with regard to lunacy, and the present lunacy certificates for admission to asylums, is untenable. Asylums are conducted on wrong principles. Let the profession sign no medical certificates of insanity whatever under any circumstances. Let them treat lunacy as bodily diseases are treated by doctors, without reference to any medico-legal aspects of it. Let the state look after this. Don't submit to the indignity of submitting medical certificates to a magistrate."

This to many of us seems an impracticable position for a responsible organ of medical opinion to take up, even supposing the present lunacy laws are not what they should be. In the first place, the British public would have good right to say to the medical profession, if it acted on the advice of the *Lancet*, "You have no moral right to inflict on society the inconveniences and dangers that would result from a sudden stoppage of the working of the lunacy laws, and the gigantic lunacy arrangements of this country that you have helped to build up and assisted in carrying out for forty years. You have no right to put individuals to the annoyances that such action would cause. You, who owe your professional privileges to the law, are morally bound to carry out the present law while it exists." I tried by a letter to evoke from the *Lancet* a formulated statement of what it would propose instead of the present laws and arrangements, but failed. Its tone is a mixture of bitterness, disloyalty, and conscious "crying in the wilderness" on this matter, though I sympathize with its efforts to strengthen the purely medical position in regard to insanity. I cannot help feeling that it is unjust towards the lunacy laws, towards the Commissioners, towards asylums, towards alienists, and, above all, towards that grand philanthropic movement to benefit the insane embodied in Lord Shaftesbury's labours in that cause that has on the whole done so much for the insane. Would any physician who had been for years the trusted adviser of a family, be morally justified in refusing to certify, when requested to do so, a member of it who had become suddenly acutely maniacal, and for whom the means of treatment did not exist at home, because the lunacy laws were bad and because he ran some personal risk? Do we not all run risks every day in other ways? Would the family be able to distinguish the doctor's conduct if he so refused from that of a man who would not attend a case of typhus in the family for fear of infection? No doubt there is a strong feeling now in England, and especially in London, against signing certificates. Many medical men there will not do so under any circumstances. I heard the other day of an undoubtedly insane man, whose relations had gone to forty doctors in London, and they all had refused to sign a certificate for his being sent to an asylum. I think this feeling will not subside for a time in regard to doubtful cases, but I have never heard of any real difficulty in getting certificates for obvious cases here in Scotland. And I don't think there ever will be any difficulty in such cases so long as the certificates can be paid for.

I cannot refer to one or two important trials that have lately occurred in London, because the decisions come to have been appealed against to higher courts, and they are therefore *sub-judice*, but I can refer to what some of the English judges have lately said. Lord Coleridge some time ago expressed astonishment that two medical certificate forms were on one sheet of paper, implying that the signer of the second certificate could see what the first contained. No doubt it is stated in the statutory form that each medical man must have seen the patient "separately from any other medical practitioner," but as a profession we never sanctioned that proviso, which it would be far more rational and better for the patient to reverse, and put "with another," for "separately from any other." I don't know any sort of case where a talk with a professional brother is more useful than before coming to the conclusion that a patient should be sent to an asylum. There is then every reason that exists for an ordinary consultation, plus risks to both doctors. All the medical reasons go in the teeth of the remarks of the Lord Chief Justice. His blame did not touch our consciences.

Baron Huddleston has lately presided at two lunacy trials, and in one he made some strong remarks about some of the present English proceedings being "shocking," and the especial danger involved in that provision of the English Acts, which admits of almost any one ("any pauper," as he said), not being a relative of the patient, or even connected with him in any way, signing the order of admission, which in England takes the place of sheriff's order here. I am of opinion that in England such "orders" of private persons will have to give way to a magistrate's "order." But the principle involved in Baron Huddleston's criticism applies to the question of who is to be the "petitioner" in our Scotch form. I always advise that no stranger, or other person not having a real relationship to the patient, should be the "petitioner." If there is no relative or guardian to be got, then let the inspector of poor, as the most convenient public official, be called in and act. Temporary arrangements can be made in any asylum for any patient being treated as a private patient, though technically a pauper. It is a bad principle for a hotel or lodging-house keeper, or other person with a mere casual relation to the patient, to be the petitioner. More lately, the learned Baron held that merely looking at a man through a carriage window was not a statutory "examination" of him by two justices, and this seems reasonable. It is most important for us as a profession to see ourselves as others see us, and whether we agree with them or not, to consider most attentively what the judges who administer the laws under which we act say about us and them. We must remember that medical and scientific ideas about disturbance of the mental functions of the brain must necessarily be only partially intelligible to lawyers and to the public, as Sir James Stephen has strongly emphasised.[1] It seems to me, in reading lunacy trials, that their very rarity makes the judges inexpert with regard to them. It sounds ludicrous to hear a judge express astonishment at the existence and danger of statutory provisions that have existed for forty years, and have worked smoothly all that time.

Everything that has taken place in recent lunacy trials should impress on us as a profession the necessity of acting with deliberation in regard to lunacy certificates, of taking no more than our fair share of responsibility, of consciously thinking of the risks we run, of keeping within the letter and spirit of the law stringently in the minutest particular, and of declining to act when there are good grounds for doing so. We should go as little beyond our professional work, too, as possible. In the present temper of the public and of the judicial mind, it is better to be able to justify all we do on grounds of professional necessity. I do not think we can reasonably expect to be protected by the law against all risk in lunacy practice any more than in surgery or general medicine. All we can ask is that future legislation in regard to our relationship to mental unsoundness shall fully recognise it to be a disease which science and public necessity have made us the sole judges of. If the laws, the general public, or the judges, set up tests and definitions of insanity opposed to those of science, then we shall be justified in handing over the whole subject to them, to see what they can make of it, and ourselves declining to act as certifiers. I cannot say I see many signs of this. There is much talk, but few signs of action. We should, I admit, have some reasons for considering our position, if frivolous actions like those brought against the physicians to Bethlem Hospital and two other London practitioners, the other day, became common. In that case we should be justified in asking that actions in regard to lunacy certificates should be put into the category of criminal prosecutions, only to be undertaken by the public prosecutor, or by his leave, and not by private parties in civil suits.

Instead of lessening, our duties in regard to disorders of the mental functions of the brain will be likely to grow apace as time goes on and our knowledge increases. The area covered by the disease will increase, let the public protest as they will. Its beginnings and lesser degrees will be more and more recognised to be a factor in conduct and motive. It will be more clearly seen that "the will" is tempered by brain action, and that a man is often overmastered by the "tyranny of his organization." We shall be asked, and are being asked, more and more to examine persons with the view of giving formal opinions as to their testamentary capacity before wills are made. Instead of having a man, in a doubtful state of mind, make a will, and then after his death have all his money squandered in a costly lawsuit to determine whether he was sane when he made it, we shall be asked to examine him and make a formal report of his testamentary capacity, which, with our grounds for the opinion, will virtually decide the whole question. Those who have a *bona fide* interest in the destination of a man's property after his death should have the right by law to have such a medical examination and such a report, if there is *prima facie* evidence of doubtful sanity or impaired mental capacity on his part, irrespective of the sanction of the testator. Few things in my professional life have given me more satisfaction than some examinations and reports of this kind that I have had to make, which have had the effect of doing justice and upsetting nefarious or improper influences that were being exercised to make men in weak or unsound mental conditions leave their means to the wrong persons. The first case of the kind I ever had to do with made a deep impression on my mind, where a report of my late friend Dr Elliot of Carlisle and myself, on the testamentary incapacity of a Cumberland statesman, had the effect, without any trial in a court of law, of squashing an improper will made, or about to be made, at the instigation of a person in attendance on him. I set myself to prepare a series of tests and medical matters to be inquired into in examining a testator in such circumstances, which my subsequent experience has enlarged, and which I have found of the greatest service. I once heard the late Sir John Holker say that he had never known, in his vast experience, a will upset, if made after a medical man had examined the testator as to his mental capacity, and if a respectable agent had drawn up the document, neither of them taking any benefit under its provisions. Why should we have to go into witness-boxes, after having been carefully primed with the facts bearing on one side of the case only, to give mere opinions on imaginary cases, which the other side easily neutralize by facts unknown to us before, when we might have examined into the whole facts during the testator's lifetime? I anticipate the time when no respectable agent will consent to draw out a will for any man about whom there can be the slightest doubt as to his full mental capacity, or even to draw out a will containing strange, unnatural provisions for any man, without a formal medical examination and report on his mental condition.

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[1] *History of the Criminal Law of England.*

I believe, too, we shall be asked to report on and certify as to the mental condition of persons about to transact important business, to enter into engagements to marry, to assume important offices and positions in life, where there are circumstances in such persons' lives or history pointing to doubtful mental stability, or even where there are strong hereditary tendencies to mental disease, far more than we have hitherto been. There is no doubt of this, that if we had such formal examinations and reports to make, we should become better medical psychologists, and study hereditary laws far more than we do now. A great advance would soon take place in our knowledge of cerebral mental function, and scientific conclusions would take the place of educated guessing.

In regard to the question of the curability or incurability of any case of mental unsoundness, on which the greatest issues constantly depend, we shall no doubt be called on in future more frequently to give opinions for various purposes, and have to annex our reasons. The tenure of appointments, the receipt of pensions, the investment of money, the future arrangements and residence of families, the education of children, may all depend on medical opinion as to the curability of certain cases of insanity. I know a case now where the whole management of an estate is brought to a standstill because I can't say effectually that the owner is incurable. If the law would give force to my opinion, by a specific provision that it was to be taken in such a case, the agent could act more freely for the benefit of the patient and his family. I have another case where, if a certificate of causation and incurability from me had any legal sanction, a man would get a good pension, instead of running the risk of being dismissed from his office. There is a very large question of lunacy policy and expenditure of public money, the solution of which depends on the curability or incurability of pauper patients. Other large cities will have to follow the example of London, and build cheaper institutions for the incurable portion of their pauper lunatics, their idiots and imbeciles, instead of making never-ending extensions of the present more costly asylums, in the vain hope of thus providing for such persons. To remain in a certain kind of asylum, therefore, will probably in the future depend on a medical certificate of curability, or, at all events, of being capable of receiving benefit from medical treatment, while the entrance to the other kind of institution will depend on a medical certificate of incurability; and this will need the sanction of new legislation.

I have no time in this paper to enter on the question of responsibility for crime on account of mental disease, and the general view of the medical profession as to the present unsatisfactory mode in which medical opinions and knowledge are brought out in Court. We shall never get out of the present most unedifying and sometimes scandalous partizanship and tendency to contradict each other in the witness-box till we are appointed by the Court impartially to examine the prisoners, with access to all the facts on both sides, and make a formal report to the judge.

There is a great social question looming in the future, and already a practical one in some of the American states, and I believe in one or two countries of Europe, in which our reports in regard to the curability or incurability of mental disease may determine whether there are or are not grounds for divorce. Many publicists of weight have expressed the opinion that absolutely incurable insanity in either of the parties should be a valid ground of divorce if the other party desires it.

III.—ON THE POSITION OF THE EMPTY AND DISTENDED BLADDER IN THE MALE CHILD.

By J. SYMINGTON, M.B., F.R.C.S.E., Lecturer on Anatomy, School of Medicine, Edinburgh.

THE following communication is intended as a contribution to our knowledge of the position of the bladder in the male child. The importance to the surgeon of correct ideas on this subject, more especially in connexion with catheterism and lithotomy, is very obvious. The special difficulties and dangers associated with the latter operation in children, on account of the anatomical peculiarities of the parts, are discussed by all writers on this subject. If, however, we refer to works on anatomy and surgery, the anatomical instruction we obtain is vague and unsatisfactory. We find it stated that the bladder in the infant is an abdominal rather than a pelvic organ, and that after birth it gradually descends into the pelvis, yet but little information will be gained as to the rate of its descent, and at what age it acquires the position characteristic of adult life. A few quotations will suffice to serve as examples of the way in which the subject is generally dismissed. Sir Henry Thompson[1] writes, "The bladder in children is an abdominal organ rather than a pelvic one." Spence,[2] "In performing the lateral operation on young children it is important to bear in mind that the bladder lies high." Quain,[3] "In infancy the bladder is pyriform when distended and lies chiefly in the abdomen." More details are given by R. Harrison in his article on "The Urinary Bladder" in Todd's *Cyclopædia of Anatomy and Physiology*. He says, "In the fœtus and infant of a year old the bladder in figure more resembles that of a quadruped; when distended, it is pyriform, like a bottle or a flask inverted, the larger end, or the superior fundus, being in the abdomen, and the smaller extremity tapering into the urethra. This is the only portion in the pelvis; at this age its vertical axis greatly exceeds its other diameters, and even when empty the greater portion of it is in the abdomen. As the child increases in years and size, its pelvis expands, the bladder gradually ascends into this region, and in the same proportion its lower fundus enlarges, so that at about six or seven years of age it presents a more oval form, both extremities being nearly equal, and very little of it rising above the pubes, unless when distended. From this period it continues to acquire gradually the adult figure, that is, its inferior fundus and body enlarge, while the superior remains stationary; hence it becomes shorter in its proportions, and broader below, so as to assume the triangular shape when empty, and the ovoid when distended."

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[1] *Lancet*, 8th March 1862, p. 246.
[2] *Lectures on Surgery*, 2nd ed., vol. ii. p. 1630.
[3] *Elements of Anatomy*, 9th ed., vol. ii. p. 662.

Drawings in illustration of this subject are even more defective than the verbal descriptions. Notwithstanding the numerous and valuable works that have been published of late years on topographical and surgical anatomy, there are no accurate drawings of frozen mesial sections of the male pelvis between infancy and adult life. Rüdinger,[1] in a sagittal mesial section of a new-born infant, gives an excellent representation of the position of the bladder, and Henle[2] also figures a section of a male pelvis at the same age. Jarjavay[3] represents a mesial section of the pelvis of an infant three months old.

There are very few mesial sections of the male pelvis in children above this age, and those that have been published are of little value. J. Houston[4] has a mesial section of the pelvis of a male child aged two years; but the method of preparation, which consisted in the removal of the pelvis, the distension of bladder and rectum with spirit, and cutting a section after hardening in this fluid, renders it of little use in determining the position of the bladder. Pirogoff[5] gives a sagittal section of a male child aged ten years; but the drawing is very rough, and the bladder, urethra, and anus do not appear to have been opened. He gives a better view of a section of the pelvis of a lad aged 17, but even here the position of the anus is not shown.

There can be no doubt but that sections of the frozen cadaver are the best means at our disposal for the accurate determination of the position and relations of parts one to another, and so far as the bladder is concerned there are no reasons to suppose that it alters its position, in any essential respect, after death.

In the course of an investigation into the topographical anatomy of the child, I have made several sections of the male bladder, which I trust will prove not only interesting to the anatomist, but also useful to the practical surgeon. The specimens I intend specially to describe in this paper are four mesial sections of children, all of whom were almost exactly the same height, thirty-nine inches, and about the same age, five and six years. In all these cases the entire body was frozen. In two of them vertical mesial sections were made of the whole trunk, in the others transverse sections were made at the level of the umbilicus, and the pelves were divided by mesial sections. In two of them the bladder was empty and contracted, in the other two it was distended with water.

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[1] *Topographisch-chirurgische Anatomie des Menschen*, iv. Abtheilung, Tafel xi.

[2] *Handbuch der Anatomie des Menschen*, fig. 131.

[3] *Recherches Anatomiques sur l'Urètre de l'Homme*, plate iv. fig. 2.

[4] *Views of the Pelvis, etc.* Dublin, 1829.

[5] *Anatome Topographica.* Petropoli, 1859.

Believing that illustrations of such sections are calculated to give a much clearer idea of the position of the bladder than can be obtained from written descriptions and tables of measurements, I have had prepared drawings of two of the specimens, one with the bladder empty, and the other with it distended (see Plates, Figs. 1 and 2). The figures are life size, and made from tracings taken from the sections while frozen. The coils of intestines, which were above the bladder and rectum, have not been represented.

Position of Empty Bladder.—This is shown in Fig. 1, which gives a view of a mesial section of a child aged five years. In this case the whole body was divided in the same plane. The bladder contained only a few drops of frozen urine and was firmly contracted. It will be seen to be situated behind the upper half of the pubic symphysis. A straight line from the upper edge of the symphysis to the tip of the coccyx passed just below the orifice of the urethra, and one from the same point in front, backwards to the juncture of the third and fourth pieces of the sacrum, nearly corresponded to the upper surface of the bladder. The prostatic part of the urethra was 13 mm. in length, and the membranes 5 mm., and the vesical orifice of the urethra was 20 mm. above the level of the lowest part of the bulbous portion of the urethra. The cavity of the bladder was triangular on section, one angle was directed forwards, another backwards, and the third, corresponding to the opening into the urethra, downwards. The rectum was empty. The other specimen with the bladder empty and contracted was from a child of the same age and height, but rather stouter. The bladder had practically a similar position and shape to that in Fig. 1, but it was quite empty, and the upper surface of the bladder was more convex.

In Fig. 1 the peritoneum lined the anterior abdominal wall down to the upper border of the pubic symphysis, and at this point it turned backwards, covering the upper surface of the bladder. At the juncture of the superior and posterior surfaces it formed a free fold, and then descended between the bladder and rectum to within 4 cm. of the anus. The peritoneum in the other specimen extended downwards in front slightly behind the symphysis; but it did not reach so low behind the bladder, and the distance from the very shallow recto-vesical pouch to the anus was 5·2 cm. In this case there was a fold of the peritoneum like that shown in Fig. 1, but a little longer. I have always found one or more folds of this kind in cases where the bladder was empty and contracted; but I have not seen any references to them. They will gradually be obliterated as the bladder becomes distended with urine.

It is difficult to make a satisfactory comparison between the position of the bladder in these two cases, and that which it occupies *under similar conditions* in the adult, on account of its usual position in the latter not having been determined. Almost all the mesial sections of the adult male pelvis that have been published are from cases in which the bladder was more or less distended. Jarjavay,[1] plate vi., gives a section with the bladder empty and contracted, in which it is lower in the pelvis than in my specimens; but it looks very much as though it had been allowed to fall downwards and backwards before it was drawn.

Position of Distended Bladder.—The positions and relations of a distended bladder are seen in Fig. 2, which represents a section of a child about six years old. The whole trunk was divided by a mesial section. Before freezing about two ounces of water was slowly injected into the bladder. A comparison of the two specimens demonstrates clearly that the bladder has not only risen into the abdomen, but has also pushed its way down towards the perinæum, and that this has been accompanied by a marked shortening of the length of the prostatic portion of the urethra. This was 7 mm. in length as compared with 13 mm. in the other case. The vesical orifice of the urethra was 10 mm. above the lowest part of the bulbous portion of the urethra, while in the specimen with the bladder empty it was 20 mm. Again the distance of the urethral orifice from the anus in Fig. 1 was 4 cm., in Fig. 2 about 3 cm. The peritoneum was reflected from the abdominal wall on to the bladder 8 mm. above the pubic symphysis, and the very deep recto-vesical pouch reached to within 18 mm. of the anus. In this child the lower half of this pouch was occupied by serous fluid.

In another male child, about five years old, I injected three ounces of water into the bladder before freezing. In this case the descent of the bladder towards the perinæum, and the shortening of the prostatic part of the urethra, although distinct, was not so marked as in the former case. The length of the prostatic part of the urethra was 10 mm., and the internal orifice of the urethra was 17 mm. above the level of the lowest part of the bulbous portion of the urethra. There was a marked difference in the position of the part of the bladder lying behind the urethral orifice in the two cases with the bladder distended. In the one represented in Fig. 2, this part of the bladder wall passed nearly horizontally backwards for about 2 cm. before it began to turn upwards. In the other case the lower end of the bladder was not so large, and the part behind the urethral orifice passed directly upwards and backwards. In this case the bladder reached as high as the base of the sacrum. The peritoneum was reflected from the anterior abdominal wall on to the bladder 2·7 cm. above the symphysis pubis. The lower end of the recto-vesical pouch of peritoneum was much higher than in the other case, being 4·3 cm. above the anus.

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[1] *Op. cit.*

With regard to the differences in position of the two distended bladders, I think it may be partly attributed to variations in the shape and position of the coccyx. In the specimen shown in Fig. 2 the coccyx is directed downwards and slightly backwards, while in the other specimen it curved somewhat forwards. In the latter case it would give more support to the posterior part of the pelvic floor. As the bladder is gradually distended it will naturally tend to extend in the direction of least resistance, and the descent of the fundus of the bladder in the one case may have been due to a weakness of the pelvic floor.

Garson[1] investigated, in the Anatomical Institute at Leipzig, the "Displacement of the Bladder and Peritoneum in the Male by Distension of the Rectum." He showed that by distension of the rectum the bladder was pushed up towards the abdomen, the prostatic and membranous portions of the urethra being stretched, the former to about double its normal length. Since then several surgeons (Petersen, Ferrier, etc.) have advocated and employed distension of the rectum in order to raise the bladder before performing supra-pubic lithotomy. We usually think of the bladder during distension as simply rising into the abdomen, and but little attention appears to have been paid to the possibility of its passing also towards the perinæum and diminishing the length of the prostatic part of the urethra. The only reference to this subject that I have noticed in anatomical works is in Rüdinger's *Supplement zur Topographisch-chirurgischen Anatomie des Menschen*, 1879. In plate iii. he figures a mesial section of a male body in which the bladder was greatly distended. In the explanation of this plate he directs attention to the low position of the base of the bladder. The plate also shows very distinctly a marked shortening of the prostatic and membranous portions of the urethra. This subject is obviously worthy of more attention than it has yet received.

EXPLANATION OF PLATES.

FIGURE 1. Mesial section of pelvis of boy aged 5 years. Bladder nearly empty and contracted.

FIGURE 2. Mesial section of pelvis of boy about 6 years old. Bladder distended with two ounces of water.

A. Bladder.
B. Rectum.
C. Peritoneum.
D. Prostate.
E. Bulb.
F. Pubic symphysis.

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[1] *Edin. Med. Journal*, Oct. 1878.

PLATE 1

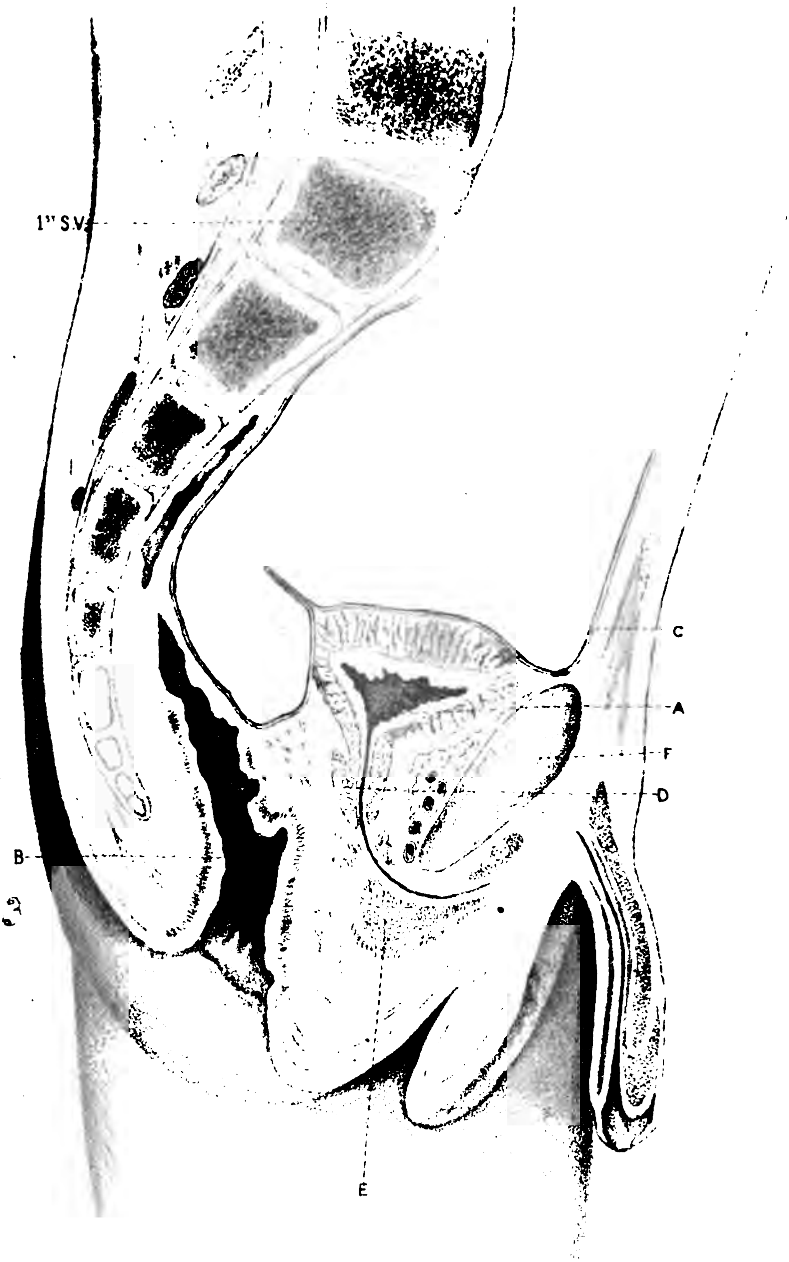
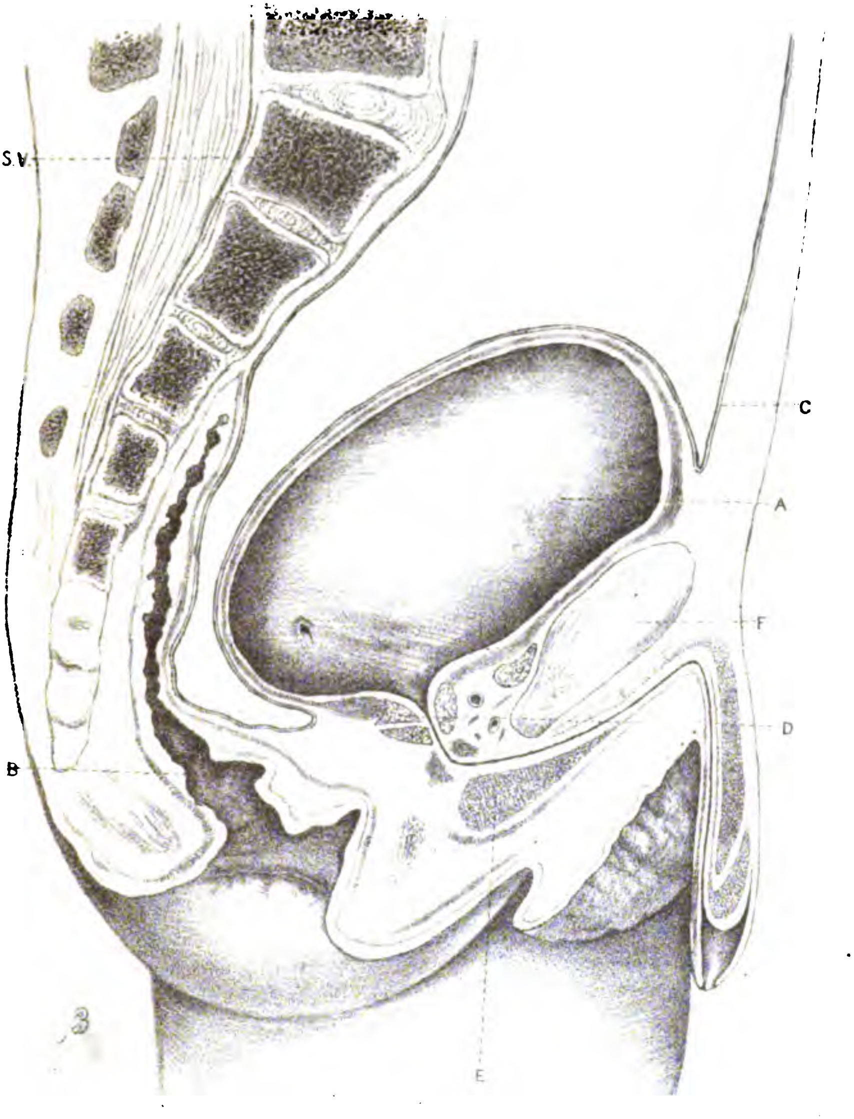


PLATE.2



IV.—ON SHORTENING THE ROUND LIGAMENTS OF THE UTERUS.

By FRANCIS IMLACH, M.D. Edin., Surgeon to the Liverpool Hospital for Women.

HAVING shortened the round ligaments of the uterus in thirty-six cases of uterine displacement, a brief review of the method and purpose of the operation, and of the results obtained, may be of interest. The round ligaments, as every one knows, pass on each side from the fundus of the uterus along the broad ligament to the inguinal canal, and are attached to various structures just beyond the external pillars of the ring. When they are seized within the pillars and pulled upon, the fundus approaches the pubic bone, and as the ligaments are of considerable strength, this anatomical fact has been utilized in the surgical treatment of uterine prolapse and retroflexion. It still remains to be shown whether the shortening is permanent, and whether, the displacements having been cured, the accompanying symptoms also disappear. If the operation were performed to cure only prolapse of the uterus, the result might be stated in a single word, and could be amply exhibited in tabular form. But as I have frequently employed this treatment in complicated cases of retroflexion and retroversion, in which the pain and discomfort before and after operation have to be estimated as well as the relative position of the uterus, it becomes difficult to give a just and impartial view of results in such a condensed form. Moreover, it is not my intention to offer an impartial account of the subject. That has already been given by Dr Adams of Glasgow, who has also made a careful anatomical investigation of the question, and by Dr Alexander of Liverpool, who has entered more fully into its surgical aspects. My wish is rather to point out the limit of the usefulness of this treatment and the disappointing results when it is applied in certain cases of painful retroflexion and version.

But, as the operation is still a new one, it is only fair to say that, in suitable cases, it is a very satisfactory one. The uterus is replaced more perfectly by it than by any pessary yet invented, and this result is obtained in a fortnight in place of six months. After two or three trials the operation is a very easy one to perform, and no special instruments are required for it. There is no need to make an incision an inch and a half or two inches long, or to attach the ligaments to the pillars or to the skin by five or six thick catgut ligatures. There need be no fear of peritonitis, and there is no necessity for a drainage tube. Immediate union almost always takes place, and the two little cicatrices become nearly invisible within a month. Though the method employed by me at the Liverpool Hospital for Women has already been described in the Erlangen *Medicinische Neuigkeiten* (14th Feb. 1885), I venture to repeat it.

The pubic hair having been shaved, and the pubic spine felt on both sides, an incision half an inch in length is made from the spine outwards, and parallel with Poupart's ligament. The sides of the incision being held apart by two aneurism needles, the fat is cut through until the glistening surface of the conjoined tendon is reached. The depth of fat is often considerable, but as there is little or no hæmorrhage, it does not cause any difficulty. There should be no groping for the round ligament until the pillars of the inguinal ring have been identified in the conjoined tendon. In some women these pillars are ill-marked, and there is a thinning or slit in the conjoined tendon just within the inner pillar, which is apt to deceive the operator for a moment. It is possible also to mistake the space between the external pillar and Poupart's ligament for the ring. When a few cross-fibres have been cut, a little mass of fat protrudes between the pillars. This is hooked up by one of the aneurism needles, which is passed somewhat deeply within the ring, and amongst the fat is found the end of the round ligament. By inadvertence a portion of one of the pillars may also be included by the aneurism needle. The fat having been cleared away, the round ligament, often consisting only of a few slender fibres, is seized by fingers or forceps and pulled with some force. While this is done the little inguinal nerve which accompanies the ligament should be cut, and some bands of fascia which adhere strongly, especially in front of the ligament, are patiently separated. In its course through the inguinal canal strands of the ligament are reflected on to the sides of the canal, and the ligament becomes much stouter when about an inch of it has been pulled through the ring. Both ligaments having been thus exposed, an assistant examines the position of the uterus, and perhaps more of one or other of them is pulled out. From two to four inches is generally sufficient. In old women with prolapse they should be pulled tighter than in young women with retroflexion. Each ligament is then attached to either of the pillars, or to both, by a single ligature of finest silk or chromic catgut; the slack is cut away and the end pinched with pressure forceps to avoid hæmorrhage, and finally the incision is closed with one suture, or at the most two sutures of the same material. It is a mistake to use numerous coarse ligatures, for it is not intended that the uterus shall be permanently slung on catgut, and, whatever precautions be taken, their employment is liable to be followed by suppuration in the wound. When the angle of retroflexion of the uterus is acute, it is well to insert an intrauterine stem before the operation, and to leave it for a few days. On the fifth or sixth day the suture is removed, and in a fortnight the patient may safely walk about her room.

There is nothing very novel about this. It is simply a mode in which the operation can be performed without fear of the ligament giving way, or of suppuration of the wound, which others have described as commonly occurring. I use no spray, and dress with wood wool. I have never failed to find the ligaments, but twice have been unable to draw them out. In both cases the uterus was retroflected and adherent to the sacrum, and the ligaments were fattily degenerated. Of course these two are not included amongst the thirty-six cases. Twice also slight indications of hernia have appeared after the operation, and the women have been induced to wear a preventive truss.

Since November 1883 nine cases of extreme prolapse of the uterus have been treated by shortening the round ligaments. Three of the women were more than sixty years old. In one of them extensive cystocele remains, and though the uterus has not again prolapsed, the operation has been of little practical service. In another, the uterus again became partially prolapsed a few months after operation, owing possibly to relaxation of weak ligaments, but is retained by a ring pessary which formerly was useless. And in a woman aged 64, whose uterus had been completely prolapsed for ten years, the cure has remained perfect for seven months. She wears no pessary and has no prolapse. The six other women were between 23 and 39 years of age, and in two instances plastic repair of the lacerated cervix was simultaneously performed. A strong young charwoman, aged 23, insisted upon going home a fortnight after operation. She walked two miles home, and was so delighted with her cure that twice she ran up the narrow stairs of her dwelling to convince herself of its permanence. On the second occasion she felt a crack, and the womb came down as before. I may add that the operation was performed in the old fashioned manner, with thick sutures and plenty of them, and that the unfortunate result was solely due to her obstinacy. Five were cured of their prolapse, but one still wears a Hodge's pessary. One, aged 27, who had suffered also from retroflexion and menorrhagia since her confinement two years previously, was perfectly cured of both complications. Another, who suffered also from chronic ovaritis and dysmenorrhœa, was cured of her prolapse, but not of her dysmenorrhœa.

Twenty-seven cases of retroflexion and retroversion have been submitted to the same operation. It has frequently been denied that flexions of the uterus cause painful or hurtful symptoms, and a distinguished gynæcologist has written a work upon gynæcology with the chapter on flexions left out. It is urged that where there is pain or menorrhagia there is also congestion as well as flexion of the uterus, and often congestion and inflammation of the Fallopian tubes and ovaries. Cure the congesticn or inflammation, it is said, and the symptoms will disappear though the flexion remains. This doctrine has received strong practical support from the numerous statistics which have been published, showing the lamentable want of success in permanent replacement of the uterus by treatment.

with vaginal pessaries of various kinds. But if the hot douche and rest have been tried in vain, the treatment of congestion and inflammation, except by mechanical or surgical means, is likely to be both prolonged in its course and unsatisfactory in its termination. Though it must be admitted that a large retroverted uterus (especially when fixed to the sacrum) is accompanied with more troublesome symptoms than a small mobile one, still even in the latter case the discomfort is often considerable. And now that the uterus (unless fixed to the sacrum) can be immediately and permanently replaced by shortening the round ligaments, it will probably not be denied by any one that congestion of a straight uterus can be more satisfactorily treated than congestion of a flexed one.

In sixteen cases thus treated there was no evidence at the time of operation of any complication of the flexion save by congestion or subinvolution of the uterus. The first underwent operation in November 1883, and the last in February 1885. They were young women between the ages of 20 and 35. In nearly all of them the symptoms dated from a previous childbirth or abortion. In all of them the uterus has maintained its normal position, and in nearly all the symptoms have been relieved to the entire satisfaction of the patients. In three, however, in whom painful symptoms have continued, there is now evidence of chronic inflammation of the tubes or ovaries, and probably these parts will have to be removed before health will be restored. It may be supposed that this inflammation is consequent to the operation, but more probably it was overlooked and only discovered upon more careful examination into the cause of the continuance of pain. It is not always easy to feel a Fallopian tube, even when distended with pus. By far the more important class of cases, however, are those in which retroflexion is associated with enlarged prolapsed and tender ovaries. These ovaries often cause agonizing and unendurable pain, yet it is sometimes highly desirable to endeavour to afford relief without removing them. They may be almost normal in structure, or they may be purulent, and it is not always easy to determine their pathology beforehand. But when they are not adherent in Douglas's space, and when there is a fair prospect that their structure is not hopelessly damaged, it appeared to me, as it would I think to most, that repositing the uterus would relieve pressure and possibly raise the ovaries nearly to their normal position. Of course the uterus is not always flexed when the ovaries are prolapsed, but in the following cases both conditions were present.

CASE I.—L. P., aged 25, married, no children, dysmenorrhœa and menorrhagia for four years. Round ligaments shortened October 3, 1883. Relief only temporary; re-entered hospital for removal of uterine appendages a few months later, but lost heart and went home.

CASE II.—R. D., aged 32, six children, the youngest six years old; never free from menstrual flow for longer than a week at a time; constant pelvic pain, for which she has been treated without success for more than two years. Operation, January 5, 1884. Since then all pain has ceased, and her menstrual periods have become regular.

CASE III.—J. D., aged 29, six children, the youngest a year old; constant pelvic pain, but no menorrhagia; ovaries prolapsed and tender, but not much enlarged. Operation, February 14. Complete relief from pain. In February 1885 she had another child. She suffered no pain during pregnancy, but had a "cross-birth," and has now a slight attack of pelvic cellulitis.

CASE IV.—A. K., aged 29, three children, the youngest a year old; constant pelvic pain and dysuria; an unhealthy looking woman; uterus measured 4 inches, ovaries tender but not enlarged. Operation, February 26. A fortnight later the whole of the sloughing mucous membrane of the bladder was removed *per urethram*, and she finally left hospital relieved of her pain, though without restoration of her health.

CASE V.—A. M., aged 31, single, a schoolmistress sent to me by Dr Grimsdale; dysmenorrhœa; ovaries prolapsed and considerably enlarged. Operation, March 17. Relieved, but still suffering so much that she has been obliged to give up her school, though she has not yet made up her mind to removal of the ovaries.

CASE VI.—A. G., aged 31, six children, the youngest nearly two years old. Menstruation had not recurred since its birth until a month before entering hospital, when "a flooding" commenced, which still continued. For three months she had been in bed with pain. Operation, March 31. Menorrhagia and pain both cured, but she is now (twelve months later) under the care of Dr Harvey of Wavertree for some renewal of the pain.

CASE VII.—J. T., aged 27, married sixteen months, no child. From June to September 1883 menstruation ceased, and then there was a "flooding," which she does not think was a miscarriage. Dysmenorrhœa both before and after marriage. April 4, shortening round ligaments, no relief of symptoms. Ovaries removed, a large chronic abscess being found in each. Since then all pelvic pain has disappeared.

CASE VIII.—C. F., aged 31, two children, the youngest seven years old, suffered from sickness and backache. Hyperplasia and retroflexion of uterus with small prolapsed ovaries. Operation, April 25. Painful symptoms quite cured.

CASE IX.—J. E., aged 24, three children*; was in bed with pelvic pains for four weeks before entering hospital. Operation, August 29. A most gratifying cure.

CASE X.—M. R., aged 24, two children; constant pelvic pain. Operation, September 5. Little relief, and her uterine appendages will probably have to be removed.

CASE XI.—S. F., a virgin, aged 18, suffering from menorrhagia, which had persisted for five weeks, and had troubled her for two years. Ovaries prolapsed and tender, uterus retroflexed but mobile. Operation, December 13. Menorrhagia and pain completely cured.

This operation, then, has yet to find its level. In simple prolapse and painless retroflexion or version of the uterus it is eminently successful. But when there is also cystocele or rectocele it is practically useless, and these complications are generally found amongst the most troublesome cases of prolapse. In painful retroflexion the ovaries and tubes are often diseased, though it is not always an easy matter to detect this condition by physical diagnosis. And while shortening the round ligaments will never cure pyosalpinx or ovarian abscess, after removal of the diseased appendages the flexion ceases to trouble. In over fifty cases in which I have removed the uterine appendages there has been more or less retroflexion in fully one-half of them. Yet I have never had occasion to treat the flexion afterwards. Still, one operation is undoubtedly less grave than the other, and when the tubes are healthy and the ovaries only swollen, the round ligaments should, in the first place at least, be shortened. The cases above narrated amply justify this position, and they have not been overstated. In no instance, I believe, has abortion occurred after operation, though frequent miscarriages were common before it. In two instances there has been parturition at full term. In both, pregnancy was easy and the children were born alive, but in both also a slight attack of pelvic cellulitis followed parturition. In one, the inflammation having subsided, I am able to state that the uterus retains its normal position and has not again become retroflected. It is too early to know its condition in the second case, as the woman has not yet risen from her bed. Two or three others are now pregnant, and I hope to be able to make a favourable report at a later date upon pregnancy and parturition subsequent to shortening the round ligaments. Gynæcologists will certainly find a use for this operation which Mr Rivington and, no doubt, many others suggested long ago, but which Dr Alexander first patiently evolved in its practical bearings in the Liverpool Workhouse, and Dr Adams first demonstrated in the dissecting-rooms of the Glasgow University. But, as indeed with every other operation, it should only be tried in suitable cases.

V.—CASE OF CYSTIC DEGENERATION OF THE KIDNEY.

By T. W. M'Dowall, M.D.

Although cystic degeneration of the kidney is frequently enough seen in the bodies of the insane, it was never my fortune to meet with such a remarkable example as is represented in the accompanying illustration. It was obtained from the body of an old man, whose history is briefly as follows:—

J. M., æt. 65, was admitted in July 1875. His mental symptoms were a combination of melancholia and dementia. He was in somewhat feeble bodily health, stooped very much, and was ruptured in the right side.

During his nine years' residence his mental symptoms varied considerably. Occasionally melancholia predominated; more frequently dementia was most marked; at intervals there were short periods of excitement, when his language was obscene, and sometimes he was so well that he could converse with his neighbours and interest himself with newspapers.

His bodily health continued distinctly feeble, but there were no prominent symptoms. In the earlier period of his residence he used to complain that he never had passage in his bowels. For years he complained of itching of the anus, and that he passed worms. Although his stools were frequently examined none were found; but that his complaints were well founded was proved at the post-mortem examination, when thousands of the common seat worm (*Oxyuris vermicularis*) were found in the intestines.

In March 1877 he had an attack of bronchitis, from which he never completely recovered. In March 1884 he was seized with pneumonia, and sank rather rapidly. The skin of the left leg became of a purple colour, as might occur in thrombosis of the main vessel, but the patient sank too rapidly for the condition of the limb to be exactly determined.

Concerning his history previous to admission here, it is only necessary to refer to an accident he met with many years ago. He more than once stated that having fallen asleep in a cart, he fell before the wheel, which passed over his body. Unfortunately, the details of this accident and his subsequent symptoms were not inquired into, a fact I much regret, seeing that the accident and the condition of the kidney probably stood in the relation of cause and effect.

The post-mortem notes are as follows:—Examination made 5½ hours after death. Weather mild. *P.M.* rigidity is well marked. There is slight œdema and mottled redness of the lower two-thirds of left leg. The glands in left groin are slightly enlarged. There is a large irreducible hernia in right groin. There are no bed-sores, bruises, or other marks of injury.

The skull-cap is unusually thin and of moderate density.

About 2 oz. of serum escaped during the removal of the brain. The membranes are thickened and opaque in the frontal and parietal regions, the convolutions are atrophied, and there is a corresponding amount of subarachnoid effusion. The vessels at the base are markedly atheromatous. On section the brain is watery; the gray matter very pale and atrophied. The lateral ventricles contain four drachms of serum. There is no trace of softening or clot.

On opening the abdomen there is a large cyst, exactly like a distended bladder, reaching from 1 inch above the pubis to the umbilicus.

The heart weighs 9½ oz. The aortic valves are incompetent. The coronary arteries are atheromatous and hypertrophied to an unusual extent. The muscular substance is somewhat pale and very soft. The mitral valves are markedly atheromatous. The right lung weighs 31 oz., adherent posteriorly and to the diaphragm. The anterior margin is emphysematous. The whole inferior third of the lung is in a condition of red hepatisation passing into gray. Left lung weighs 17½ oz., in the same state.

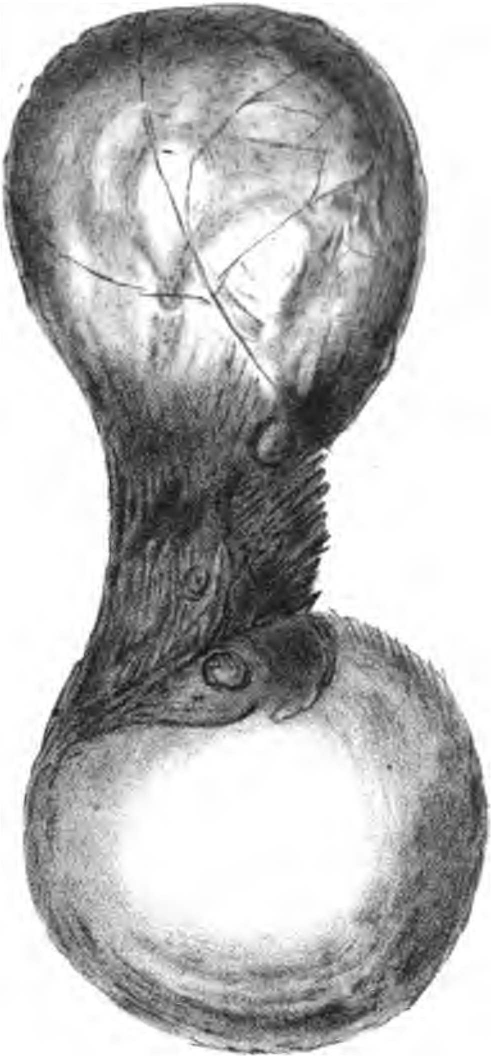
The liver equals 44 oz., soft and friable.

The left kidney equals 45 oz. It consists of the usual structure in the middle, but its ends are expanded into immense cysts. It is 11 inches long, nearly 5 in breadth, and 15 inches round the larger end. On evacuating the urinous fluid, the organ weighs only 10½ oz. The right kidney weighs 8½ oz. It is fatty, contains a number of small cysts, and the capsule is adherent here and there.

The accompanying illustration gives a fair idea of the shape of the organ after removal from the body. Whilst in the abdomen the lower cyst pressed forwards to the anterior wall, and the upper one lay deeply in the left hypochondrium and immediately in contact with the diaphragm. Besides the large cysts there were a few smaller ones in the organ, but chiefly about the pelvis and in the neighbourhood of the large ones.

In the way of remarks very few are necessary. The whole interest is in the unusual development of the abnormality. Clinically the case is of no interest, as the condition was not discovered till after death, but it can be easily understood that the tumour in the hypogastric region might have formed a most difficult problem of diagnosis.

As to the mode of development of such cysts nothing need be said. All that is at present known on the subject is contained in two excellent articles—one by Dr Frederick T. Roberts, in *Reynold's System of Medicine*, vol. v.; the other by Ebstein in *Ziemssen's Cyclopædia of Medicine*, vol. xv. It is important to note that both authors admit that large cysts of the kidney are occasionally due to accidental violence.



Half Natural Size.

Dr M'Dowall's Case of Cystic Degeneration of Kidney.

J. Bartholomew. F

Part Second.

REVIEWS.

Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D., F.R.C.P. (Edin.) Second Edition. Edinburgh: Young J. Pentland: 1884.

THIS work has been so recently reviewed in these pages that this, its second edition, does not require a minute analysis. That a second edition has, after a comparatively brief interval, followed the first is sufficient proof that the work filled a gap in medical literature. Dr Bramwell is to be congratulated on its success in this country, and for its having sufficiently commended itself to our brethren on the Continent to have led to its translation into the German, French, and Russian languages.

No very radical changes have been made in this edition, beyond the addition of a pretty full account and discussion of what are known as "railway cases," embracing, as that necessarily does, the question of concussion of the spine. It seems to us that Dr Bramwell discusses these questions with fairness, and that his conclusions are clearly and distinctly stated, and go as far as the evidence at our disposal sanctions; while the difficulty of distinguishing between the effects of simple shock from concussion and minute injuries accompanying the shock are fully acknowledged. He does not support the tendency which exists in certain quarters to minimise the gravity of railway injuries, as they are infrequently followed by evidences of marked organic lesion, but, on the contrary, recognises that the effect of these injuries is often to unfit their victim for a more or less prolonged period, and sometimes for life, to enjoy or even to perform the ordinary duties of his position. In forming an opinion on individual cases he insists on the importance of duly weighing the general as well as the medical facts bearing on the case.

We are somewhat surprised that Dr Bramwell does not discuss the various theories held as to the nature of the tendon reflexes, for the question is surely as interesting and as important as many of the points he dwells upon with considerable analytic minuteness.

To those wishing to make themselves familiar with the present state of knowledge on diseases of the cord we commend this book, as one in which they will find them carefully and fully considered, and illustrated by beautifully coloured drawings of diseased cords, and by many well-constructed diagrams.

Vorlesungen über Pharmakologie für Aerzte und Studirende. Von Dr C. BINZ, ord. Professor, Director des pharmakologischen Instituts der Universität Bonn. I. und II. Abteilungen. Berlin: Verlag von August Hirschwald, 1884–5.

THESE excellent lectures are certain to be widely read and deeply appreciated, not only in Germany but wherever the German language is read. They begin with a brief historical sketch of methods of treatment, the surgical and natural in the past, and a notice of the gradual development of the knowledge of drugs, of their classification, and of the formation of the different pharmacopœias. He points out that the art of printing was applied to these subjects almost as much as to the Bible and Psalter, so that in the sixteenth century there was a large array of books on such matters, and that, therefore, Cerimon might well say in *Pericles*—

> "'Tis known, I ever
> Have studied physic, through which secret art,
> By turning o'er authorities, I have,
> Together with my practice, made familiar
> To me and to my aid the blest infusions
> That dwell in vegetives, in metals, stones;
> And I can speak of the disturbances
> That Nature works, and of her cure."

The introduction then goes on to show that pharmacology naturally falls into three parts,—chemical, physiological, and clinical.

It is interesting to compare the different use of the term pharmacology as employed in these lectures, and in Schmiedeberg's recent work. Binz says, "Pharmacology in German medical phraseology is the term applied to the knowledge of the source of the chemical and physical characters of the poisonous and healing actions, and of the therapeutic applications of all things which scientific pharmacy offers to medical men." Schmiedeberg, on the other hand, states (Grundriss der Arzneimittellehre, s. 1.) that by pharmacology "is understood the knowledge of the changes effected on the living organism by chemically working substances in general, without regard to their use in medical treatment." There can be no doubt that this latter view, that pharmacology is the science of the action of drugs, is the more modern conception.

In these lectures Professor Binz avoids all toxicological subtleties, and simply discusses such matters as are likely to be of use to the medical man. They begin with anæsthetics, and discuss in turn all the drugs directly affecting the nervous system, which lead to æthereal oils, carminatives, resins, astringents, bitters, alkalies, and metals. The style of these lectures is easy and pleasant, and the work altogether is at once useful and agreeable reading.

On the Various Modes of Testing for Albumen and Sugar in the Urine. Two Lectures. By GEORGE JOHNSON, M.D. Lond., F.R.C.P., F.R.S., Physician to King's College Hospital. London: Smith, Elder, & Co.: 1884.

DR JOHNSON'S authority on diseases of the kidney stands so high that any production of his pen is received with great respect. These lectures, which have already appeared in print, deal with a subject of immense practical importance, and should be read by every medical man who has not yet done so.

The author devotes several pages to the question of picric acid, in the course of which he strongly urges the employment of sensitive tests for the detection of albumen, mentioning the case of recovery from acute nephritis, and of cirrhotic Bright's disease, as instances in which the most delicate tests should be used. We entirely agree with him in this, and are further quite at one with him in thinking that even the faintest trace of albumen in the urine is abnormal and pathological.

In the second lecture, Dr Johnson claims for the picric acid and potash method of testing for sugar "that it is as accurate as any other, and that for the estimation of sugar in the urine it is even more accurate than either Fehling's or Dr Pavy's process, because the picric acid is not acted on by uric acid or urates, which reduce the oxide of copper." He fully describes the picro-saccharometer and the mode of using it, which is certainly easy, and, so far as our experience goes, extremely accurate in its results.

We find ourselves once more in entire agreement with the author when he says, in concluding, "Let me impress upon you the importance of testing the urine for both albumen and sugar in all cases of disease that come under your observation." And this for the reason that "until this practice becomes general throughout the profession, many cases of essentially curable albuminuria and glycosuria will be overlooked until they have reached an incurable stage."

Journal of Cutaneous and Venereal Diseases. Edited by HENRY G. PIFFARD, A.M., M.D., and PRINCE A. MORROW, A.M., M.D. Vol. II. New York: William Wood & Co.

THE editors and publishers of this Journal have to be congratulated on the value of the contents of the volume before us, which shows no falling off as compared with the previous one. Besides a large number of original papers, which are illustrated by excellent chromolithographs and accurate woodcuts, there are full reports of the discussions at the meetings of the American and New York Dermatological Societies, and carefully selected *résumés* of all the most important papers in the foreign journals bearing on cutaneous and venereal diseases. Every number will repay perusal, and the periodical deserves the hearty support of the profession.

Homicide and Suicide in the City and County of Philadelphia, Pa., during a Decade 1871 *to* 1881 *inclusive.* By JOHN G. LEE, M.D., Coroner's Physician, etc. *Philadelphia Times* Printing House.

DURING the above decade there were investigated in the coroner's office in Philadelphia 12,936 cases of death, of which 323 were caused by homicidal violence, and 636 were cases of death from suicide; and the considerations to be drawn from an examination of the units making up these figures constitute the subject matter of the papers forming the present pamphlet. In regard to the question of homicide, Dr Lee notes that in no case did the number of homicides bear any relation to the number of the population. As to age, however, it was different. Most cases of death from homicide happened in individuals between 20 and 30 years of age, the next in order of frequency being among those between 30 and 40 years, and the next again among those between 40 and 50. Fewest lives were destroyed between the ages of 80 and 90, and between 5 and 15. Gunshot wounds accounted for 66 deaths, cutting by instruments for 53, and violence generally (such as blows, kicks, and injuries inflicted by nature's weapons, foreign bodies, or falls) for 126, poison for 18, criminal abortion for 32, and suffocation for 14, leaving 14 to be explained by miscellaneous causes. The only remaining point worthy to note is that homicide is most common in the warmer months of the year, July especially, and least so in the cooler months, especially March.

Suicide, like homicide, bears no numerical relation to the population, but is vastly more common among the white than among the coloured American people, being, in this case, 628 whites to 8 blacks. In the present compilation married suicides are more numerous than unmarried—a deduction opposed to the experience of European observers, but probably explained by the early age at which marriage is contracted at Philadelphia. As to the mode of committing suicide, Dr Lee finds that "hanging, which presents the greatest number of cases, seems to possess great popularity with both sexes," and that "shooting follows next in the list, though it finds but little favour with the weaker sex." Hanging is certainly easy to accomplish, and is popularly believed to be a pleasant death, while shooting should be relatively more common in America than in Europe, owing to the almost universal custom of carrying firearms in America. Laudanum, morphia, and opium caused a goodly number of suicidal deaths, especially among women. Submersion, as a form of self-murder, stood only fifth in the list, although Philadelphia's situation affords abundant facilities for this form of suicide. As to nationality, Dr Lee tells us that native-born American males usually hang or shoot themselves, while the females show a preference for narcotic poison. Germans select either death by shooting, or by some form of poison. Those of English nationality either cut their throats or shoot themselves; and in the rare instances of suicide occurring among our Irish population, drowning or hanging are usually the modes selected." The pamphlet, as a whole, is sound, and represents a considerable amount of useful statistical work. But it would have gained in worth had its style been a little more lucid, as for example, where Dr Lee, after adverting to the difficulties of procuring data sufficiently reliable and numerous enough on which to found generalizations, commences a new paragraph with the following:—"This work it has been my ambition to do, or rather to commence, occupying an official position offering exceptional advantages for the study of self-destruction in its different aspects, phases, and relations to and among the population of a great industrial and commercial centre."

Selections from Essays on Health Culture and the Sanitary Woollen System. By GUSTAV JAEGER, M.D., Stuttgart. Dr Jaeger's Sanitary Woollen System Co., Limited, 42 and 43 Fore Street, London, E.C.: 1884.

THIS book, which is designed as an advertisement of the sanitary woollen system, contains a strange collection of quasi-scientific facts, deductions, and persuasions. The sanitary woollen system—by which is meant the system of employing only woollen material for all our clothing and bedding—has much to be said in its favour, both on account of its capacities for maintaining the warmth of the body, and also as permitting cutaneous transpiration. But it is a little ridiculous, and shows how a good cause may be spoiled by over zeal, when we find the author stating his belief that a dress of woollen material will go far towards preventing the wearer from contracting diphtheria, and will certainly prevent, and in some cases cure writer's cramp. However, the diagnosis of the diphtheria which was averted may be as questionable as the peculiar explanation of the writer's cramp, which attributes that disorder "to the influence of the vegetable fibre of the paper," and says that it (the cramp) may be cured by the use of a strip of woollen material under the hand while writing.

Transactions of the Clinical Society of London. Vol. XVII. London: Longmans, Green, & Co.: 1884.

THIS volume comprises the proceedings of the Society during the session 1883–4. It contains many communications of interest, but none of very outstanding importance. The absence of a report of the discussions elicited by the papers detracts somewhat from the value of the proceedings; yet we are almost grateful to the Council for keeping the volume within its present dimensions.

Dr Bastian contributes a case of disseminated cerebro-spinal sclerosis without tremor. Mr Symonds writes an ingenious paper, attempting to find a relation between labial herpes and rigor. Dr Cayley records a case of pneumothorax during the course of typhoid fever, in which recovery took place; but considerable doubt will be entertained as to the correctness of the author's explanation of its mode of production. Dr West also records a case of recovery from pneumothorax without effusion. Dr Burney Yeo's case of pyrexial syphilis again reminds us of the importance of not only careful, but minute examination, in cases which appear obscure. Dr Hood's case of angina pectoris immediately followed by pericarditis is almost unique, if his reading of it is to be taken as correct. Mr Durham details a valuable case of very severe supra-orbital neuralgia following injury, which was cured by trephining after medicinal and other resources were exhausted. Dr Kingston Fowler gives a short notice of a case of pulmonary regurgitation, his opinion of the nature of the case being endorsed by a sub-committee. Other papers are equally deserving of notice did space permit their enumeration.

Report of the Bourton-on-the-Water Cottage Hospital. 1884.

THIS is the twenty-fourth annual report of this, the third oldest Cottage Hospital in England, and is a model production, describing much good work quietly done, supported by the neighbours, rich and poor, worked by an excellent committee, the moving-spring of which is a distinguished Indian medical officer, now retired.

The only fatal case during the year was one of ovariotomy. There are few accidents admitted, but many serious maladies, and one excellent feature in the report is that both in- and out-patients have subscribed of their poverty to the funds of the Hospital.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIV.—MEETING V.

Wednesday, 4th March 1885.—Dr LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF ORDINARY MEMBERS.

The following gentlemen were elected Ordinary Members of the

Society:—Allan Thomson Sloan, M.B., C.M.; John William Ballantyne, M.B., C.M.

II. Exhibition of Patients.

1. *Dr J. M. Cotterill* showed a CASE OF TALIPES EQUINO-VARUS CURED BY OSTEOTOMY. The patient, a young woman, suffered so much pain from the deformity that she was unable to follow her occupation. The sole of foot could not be put to the ground, and the tendo Achillis was very much contracted. The tibialis anticus and posticus tendons, the plantar fascia and the tendon of the adductor pollicis were first divided, and splints were put on to bring the foot into the same straight line with the leg, but no attempt was made to bend it at the ankle. A fortnight later the cuboid and external cuneiform bones were removed, along with the thickened bursa lying over the cuboid, and the tendo Achillis was divided. This allowed the foot to be brought into very fair position. The subsequent treatment, consisting in the application of the weight and pulley, effected a complete cure. The pressure made in this way was lighter than it would have been by splints and bandage, and the traction more efficient. This was a mode of treatment which had not received the attention it deserved. It could not be applied so easily in the cases of young children as in the adult, but it might be more often tried than it was. The patient could wear an ordinary boot and walk any moderate distance without trouble.

2. *Dr C. W. MacGillivray* showed a case on whom he had operated for TALIPES EQUINO-VARUS OF THE LEFT FOOT. The patient, a boy æt. 6, had come under his care about six months previously. The deformity was very aggravated, tendons and fasciæ being tense, and the bones of the foot considerably altered in shape and position, the boy walking on the thickened integuments over the dislocated cuboid. Tenotomy of all these tendons and fasciæ was first performed, and the leg put up both in splints and plaster-of-Paris, but without any beneficial result after several months of treatment. An incision was therefore made on the outer side of the foot over the displaced cuboid, which was removed along with the anterior portion of the os calcis and the external cuneiform bone. This healed rapidly, the foot being placed on a suitable splint, and it was then found that, although the internal displacement was considerably improved, the anterior portion of the foot still continued to point downwards, through the displacement downwards, forwards and inwards, of the scaphoid on the astragalus. A fresh incision was therefore made in the position of the former one, and as the bones were so much altered that it was impossible to distinguish their anatomical relations, a truncated wedge of bone was removed, the blunt apex of which corresponded to the neck of the astragalus and scaphoid, the

base to the outer aspect of the foot between the os calcis and fifth metatarsal bone. The result was to get the foot into perfect position; the wound healed without a bad symptom, and now, six weeks after the operation, the boy is walking about with perfect ease on the sole of his foot, which, although shortened and without the arch on the inner side, is perfectly movable at the level of the mesio-tarsal articulations.

III. EXHIBITION OF PATHOLOGICAL SPECIMEN AND CHART.

1. *Dr E. F. Neve* showed a specimen of ANEURISM OF THE ABDOMINAL AORTA. It was taken from the body of a man, æt. 39, who had no history of syphilis, alcoholism, or strain. He had had symptoms of aneurism for nine years, during the last four of which he was under Dr Neve's care. The specimen showed that there had been first a true aneurism, that this was followed by a false aneurism in front of the aorta, hæmorrhage having occurred through some atheromatous ulcers, and that this having healed by coagulation of blood, another false aneurism of very great size had formed behind the aorta, separating it from its connexions and floating it, the first false aneurism and the pancreas against the anterior abdominal wall producing all the physical signs of a solid tumour. The lumbar vertebræ were eroded, and the patient had died of slow hæmorrhage behind the peritoneum.

2. *Dr John Haddon* showed the TEMPERATURE AND PULSE CHART IN A CASE OF CATHETER FEVER. It was a case in which he had been the nurse, Dr M'Leod of Hawick the general practitioner, and Prof. Chiene of Edinburgh the consultant, and whatever credit surgical science had in the recovery of the case, he and Dr M'Leod were agreed that such credit must be given to Prof. Chiene. After about eight years of more or less difficulty in micturition, owing to enlarged prostate, the illness began on 10th January 1884 with great difficulty in micturition, while during the night the urine passed unconsciously. On 13th January a soft catheter was passed, and about 20 oz. of urine withdrawn. The symptoms seemed somewhat relieved, but on 19th January they became worse, and on 20th January the patient was comatose. On that day, as no soft catheter could be passed, the silver prostatic one was passed at noon, and 30 oz. of acid urine taken off, followed by a white stream of pus. Death seemed imminent all that day. At 9 P.M. the bladder was again emptied, and washed out with a solution of corrosive sublimate. At 11 P.M. consciousness returned, and he began to improve. The emptying and washing of the bladder was continued, and after much suffering he began to recover. He was dressed for the first time on 23rd April, and by the help of the catheter he continues in fair health. Sphygmographic tracings were also handed round, showing the character of the pulse throughout the attack.

IV. Exhibition of Instrument.

Dr Allan Jamieson showed a NEEDLE WITH LENS fitted on the handle, to be used in the removal of superfluous hairs by electrolysis. The wire from the battery was fixed into the handle by means of a screw, and the needle inserted, by the aid of the lens, into the root of the hair, and the circuit was completed by the patient touching a sponge connected with the other pole of the battery. A little frothing took place, and the operation was completed. The hair could then be removed by a forceps. Dr Jamieson also showed a FORCEPS with fine points to be used in the removal of such hairs.

V. Original Communication.

Dr Clouston read his paper on THE POSITION OF THE MEDICAL PROFESSION IN REGARD TO CERTIFICATES OF MENTAL UNSOUNDNESS AND CIVIL INCAPACITY, which appears at page 889 of this Journal.

The President, in congratulating Dr Clouston on his paper, said he had received apologies for absence from several gentlemen, including Dr Rutherford of Dumfries, Dr Campbell of Carlisle, Dr Howden of Montrose (who said that had he been present "he should have argued that when medical men were called in to certify they should be paid for their opinion rather than for their certificate"), the Dean of the Faculty, Mr Guthrie, Mr Gibson, and Mr Chas. Scott, advocates.

Dr Ireland thought Dr Clouston had covered so much ground that any one rising to speak would, if he tried to do justice to all the points the writer's sagacious mind had raised, have to make a speech as long as the paper itself. He felt that he could only touch on one point, and that was the position of the sheriff in relation to medical certificates. He could not agree with Dr Clouston that the sheriff's duties should be merely ministerial; that he should simply receive the opinion of medical men and act on it, without allowing his own judgment to have play in the matter. Certainly one good point was made against the legal functionary, and that was whether he was capable of knowing if an asylum were a proper place for a lunatic or not. He (Dr Ireland) must think that the power assumed by the sheriff was a great advantage to the medical profession. Had a similar power existed in England in committing lunatics to private asylums, they might have heard less of recent cases than they did, and the public distrust would not have been aroused. No doubt the sensational articles that had been written had much to do with this feeling of distrust, but if there were a stipendiary magistrate to look over certificates, the distrust would be greatly lessened. For his own part, rather than that the sheriff should be deprived of his power, he would have him study a little insanity, or brain physiology.

Dr Campbell said there were in the paper several points of interest to the general practitioner. One of these was the suggestion that representation should be made to the Board of Supervision that the salaries of parochial medical officers should not include their fees for certifying lunatics. The Board of Supervision held that the salaries and fees should be separate, but, unfortunately, medical officers were compelled to submit to the pleasure of the country Boards. Another point of importance was that the fact setting forth the phase of insanity might be, in the smaller asylums, at least, of some value, as indicating the mode of treatment that should be adopted.

Dr Yellowlees of Gartnavel had noted one or two points of special interest in this very valuable paper. The most significant, and one of very eminent importance, was the position of the sheriff in relation to the medical certificates. Was his granting the warrant a judicial or a ministerial act? It was within his knowledge that in the same county sheriffs took different views on this point. Some sheriffs criticised the certificates with very great care, and refused the warrant if they deemed them inconclusive. Others, on being satisfied that they were formally correct, granted the warrant forthwith. He did not quite agree with Dr Clouston as to the wisdom of regarding the sheriff's act as purely ministerial. He thought the granting of the warrant entitled the medical men to protection, and it should therefore be considered a judicial act. In the certificate there were two distinct things: first, the facts setting forth the insanity; and, second, an opinion founded on these facts that the person was of unsound mind, and should be detained in an asylum. The sheriff might or might not be able to make very much of these facts, but they were set forth for his consideration, his warrant gave effect to the opinion founded on them, and whether his signature protected or not, it ought to do so. He agreed with Dr Clouston as to the importance of holding public inquiries into the state of lunatics who were troublesome or dangerous outside asylums. He did not think the procurator-fiscal was called in as often as he should be. There were cases where the friends would not interfere and would not call in medical men, and where the medical attendant could not interfere, but where the fiscal could, and with good effect. Unfortunately, the fiscal refused to take cognizance of any act done by a lunatic, unless it was done in public. He did not agree as to the wisdom of granting any and every troublesome patient in an asylum a public inquiry whenever he chose to demand it. It would be giving such a patient too much importance to take him before a public court for inquiry. In the Commissioners of Lunacy they had all that was needed for such cases. Some patients would complain though fifty courts found them insane. He was afraid that an action for damages, possible only at the instance or with the consent of the public prosecutor, might prove to act very hardly and unfairly on medical men. He did not think that would be a wise way of averting the troubles now experienced by their brethren in the South. Testifying to soundness of mind was, he thought, a duty they would be more frequently called on to discharge in future. It was a point of much importance in relation to many transactions, such as making wills, important business engagements, etc.; and it would be found a far more delicate and difficult task to testify to soundness of mind than to certify unsoundness. Nothing could be more unwise than to grant a certificate of sanity to a stranger after a brief interview. He had known a distinguished practitioner incautiously grant such a certificate to an undoubted lunatic who had just escaped from an asylum. He considered Dr Clouston's remarks on this point of extreme value.

Sheriff Thoms, on the call of the Chairman, made a few remarks. He was afraid the Society might consider that his soundness of mind required to be testified to before he spoke to them on one or two points in Dr Clouston's paper. He believed that every one was cracked in some respects on one point or another. The legal aspect of insanity being one of his "fads," he was afraid he might be in danger of being considered unsound on this question. He was, however, sound enough to appreciate the value of the paper. On one or two points he did not agree with Dr Clouston. He (Dr Clouston) rather ignored the historical aspect of the law in Scotland in reference to lunatics not possessed of property. It was only of late years that punishment for crime followed where there was no property possessed by the accused. No one was punished unless he had property till about 150 years ago, and could pay not only a fine, but a sum into the "fisk." Sheriffs, procurators-fiscal, and sheriff-clerks had no salary until 1747, and had to be paid out of the Court's treasury or fisk (the Renfrewshire court-records were the most accessible evidence on the point, as they had been printed and published), and if a man was a beggar, he was not prosecuted, as nothing was to be got from him for the fisk. Cases of lunacy were similarly treated until lately, and it was those in which property was not involved in which the inspector of poor was called on to act. There were various influences at work here. Dr Yellowlees had said that proceedings at the procurator-fiscal's instance would be a help in cases where the friends would not, and the medical profession could not interfere; but when cases came to the fiscal the county had to bear the expenses, and the fiscal's anxiety was to get the thing done as cheaply as possible. He therefore went to the inspector of poor, because, if the fiscal could not recover from the county, the inspector had to pay. This matter of payment had a great deal to do with the question. The lunacy grant, in his counties at any rate, had had a very deteriorating effect on the inspectors of poor and their anxiety to increase the class of lunatic paupers, and he should be sorry to make his substitutes in the North believe that their duties under the Lunacy Act were ministerial rather than judicial. Many cases were brought before them rather to get the lunacy grant than to have the insanity declared. He therefore himself scanned every certificate he got, and he should not like that the affixing of his signature should be considered as merely a ministerial act. It was of the utmost importance to have the matter viewed in a more serious aspect. It was very different in other places where the medical profession occupied such a position as, say, in Edinburgh or Glasgow; and this was what he felt, as regards the legislation of Sheriff Courts,—that our legislators and those who inspired their action were too much inclined to consider places in the far North and in the remote West as on the same platform with Glasgow, Aberdeen, Edinburgh, and Dundee. What would do for large towns would not work in remote localities. The position of inspectors of poor in the North was such as almost to be a disgrace. He had to try one inspector lately for culpable neglect of a pauper woman. The inspector had given her no attendance, save that of an old sailor, to dress sores on her thighs, the result of dropsy. His conduct received the imprimatur of the local board. She died. They could not try the inspector on a charge of culpable homicide as he deserved, as the woman's body was so covered with vermin that no post-mortem examination could be made. But he was tried for culpable neglect. It was a difficult matter to get a conviction, most of the jurymen being members of parochial boards. Legislation should be on lines that were elastic, and made to apply to different parts, not only to places basking in the sunshine of civilisation like Edinburgh and the other towns he had mentioned, but to places where the days were short and the nights long, as in the North. As to public inquiry, wherever they had a litigated case they were sure to have the facts on both sides brought out, but where there was no contradictor, as in lunacy cases, it became the duty of the judge to protect the alleged lunatic, and he must, so to speak, act as counsel to that party. The judge must be the panel's counsel. That was what he attempted to do himself. It struck at the root of Dr Clouston's contention that the sheriff should only act ministerially. Medical men would also feel the benefit of this judicial treatment of lunacy applications, because the subscription of the sheriff *causa cognita* would prove a protection to medical men who signed the certificate. The want of the magisterial interposition was, he considered, a cause of the troubles in England. There were other points well worthy of notice in Dr Clouston's suggestive and discursive paper into which, had time permitted, he might have gone. No harm, but on the contrary much good, would result from full and free discussion of such subjects between legal men and the medical profession. He had to thank the gentlemen of that profession who were present for permitting him to make these few remarks.

Dr Haddon expected to have heard something in the paper regarding the necessity of making the study of insanity compulsory in the schools. He thought this a most important matter, and one that should be attended to without delay.

Dr Affleck considered that in the matter of certificates the profession should be protected against vexatious proceedings, but the public were also entitled to protection from ignorant and careless practitioners who might unite to certify on wrong grounds. It would never do that such practitioners should be able to take shelter behind the sheriff. When they heard that there had been no prosecution in Scotland, it showed how well the thing had been done on the whole by practitioners in this country. He considered the granting of the certificates separately was quite an unnecessary piece of formalism, because it was often a very difficult matter for one of the certifiers at least, who might never have seen the patient before, to get at facts indicating his insanity, though it might be easy enough for the family attendant to do so. It was only right that the medical men should have a consultation beforehand. He agreed with Dr Haddon that the profession should be well educated in the evidences of insanity.

Dr Maclaren (Larbert) considered it ludicrous to expect medical men to go into the minute details of certificates, and to run the risks they did without providing for their training in these matters during the regular curriculum. The tyranny of parochial boards was unfortunate. They had the matter entirely in their own hands. He knew of one instance where the board had insisted on their medical officer providing not one, but both certificates, and he had to go about among his medical friends begging them as a personal favour to sign the second one for him. A great deal had been said about confining patients in asylums. He wished to know if the law made any provision for their apprehension after the certificates were signed.

Dr Allan Jamieson said that when he practised in Berwick-on-Tweed, the Border practitioners, even those of them who possessed Scotch degrees or diplomas, found that their certificates were not accepted, because of their living on the opposite side of the Border to that in which the asylum to which the patient was consigned lay. Many of the patients from Berwick were sent to Scotch asylums, and in such circumstances practitioners from the Scotch side had to be called in to certify. The matter had been referred to the Commissioners, but nothing had been done to remove this disability under which they lay.

The President congratulated the meeting on the great concensus of opinion that the teaching of insanity should be made a compulsory part of medical education, and that the teaching should be in connexion with some asylum. In no other way could we hope to be spared the recitals of those horrifying cases of murder and suicide so frequently met with in the public press, and which might have been averted by more rapid diagnosis on the part of the medical attendant. He remembered the unfortunate case of the well-known Hugh Miller, who was permitted to go about without due control, and armed with a revolver, when he was only too manifestly labouring under delusions of a dangerous character. Had ordinary precautions been taken, and Mr Miller been placed under medical control, in all probability a valuable life might have been spared and a public scandal avoided. Fully twenty years ago the extra-mural school of this city took action, and provided instruction on mental diseases at our large asylum; and lately the University following suit, though tardily, has established a special lectureship on the subject under the care of Dr Clouston. The profession, however, labours under other disadvantages of a technical nature, some of which have been alluded to. One which has always appeared to him as involving a certain amount of hardship, is the very limited space afforded the medical man on the certificate paper for the statement of the facts observed by himself, or ascertained from others, which enable him to certify the case. In courts of law and elsewhere these certificates have been held up to ridicule, owing to the imperfect statement of the grounds of our medical opinion. Is it to be wondered at that in the case of aged practitioners, whose sight is defective and whose writing is in large characters, that with such limited space these certificates are open to criticism? At one of the evening meetings in the College of Physicians, Dr Skae favoured the company by reading some certificates which had come officially into his hands. One bore that the fact upon which the opinion of unsoundness of mind was granted was that the party "wagged his head." It so happened that these words were written in half-text, and occupied all the available space at the command of the medical man, who was advanced in years. The remedy is easy. Let the vacant page at the end of the sheet be utilized, and let each certificate occupy one full page. The controlling lunacy authorities should see to this, and thus relieve the profession from a difficulty which all must feel who have ever certified such cases. Some of the speakers had alluded to the difficulty experienced in dealing with homicidal patients who had as yet only indulged in threats, and reference had been made to the method of certifying such as criminal lunatics. This procedure was peculiar to Scotland, and was one which enabled relatives to protect themselves from imminent danger, and at the same time to secure that the lunatic would not be let loose upon them until a satisfactory cure was effected. The process unfortunately entailed, in the case of paupers, some expense on the parochial boards, and they had sufficient influence with the Legislature to have a supplementary Act passed in 1862, allowing the inspector of poor to take charge of criminal lunatics. The result now is, that the special circumstances of the cases are soon forgotten; and as the expense of maintenance has to be borne by the parish, any asylum superintendent has no difficulty in setting these patients free. Dr Yellowlees stated that in the West an actual assault must first be committed to justify the detention of a person as a criminal lunatic. In Edinburgh this is not necessary. There must, of course, be a charge of some kind to enable the police to interfere; but it is found here that it is sufficient if, say the wife informs the officer that the patient has threatened her, or that her life is in danger, so long as he, the husband, remains in the same house. The other day a case occurred which illustrates the subject well. A man who had been an inmate of several asylums, and had always managed to make his escape, came suddenly home, to the great terror of his wife and family, whose lives he had repeatedly threatened. Being a pauper, noue of the incarcerating parishes had any interest in interfering, and they turned a deaf ear to the entreaties of the wife. The lunatic remained indoors, and constantly watched the entrance of the house and also the movements of his wife, who ultimately managed, through a medical man, to send him (the President) a statement of her case. To the wife it was explained that she must charge her husband in the manner indicated. When the officers of police obtained entrance, the man was found seated at a table taking his tea, with five knives laid out before him. His family were cowering in the various corners of the apartment in abject terror. The apprehension, he is convinced, was not made a moment too soon; and now, most unfortunately, according to the present state of the law, the case is at the disposal of the parochial authorities, who, after a short detention, might obtain the liberation of this cunning and self-possessed lunatic. With Dr Affleck's interpretation of the words in the certificate, "separately from any other medical practitioner," that they forbade consultation between the two certifying practitioners, he could not agree. There was nothing to hinder the doctors, before and after their examination of the lunatic, to meet, compare notes, and come to an understanding on the case.

Dr Clouston said he would not make a lengthened reply because of the lateness of the hour. He had to thank the President and the Society for the hearty way in which his paper had been received. After the opinions expressed as to the position of the sheriff, he felt it would be useless to say more on that point. He ought to explain that when he proposed to allow certain patients in asylums a judicial trial as to whether they were insane or not, he only meant this to apply to a very few exceptional cases. In answer to Dr Maclaren's question he might say that the warrant authorized the transmission as well as the detention of the patient. In regard to the point raised by Dr Jamieson, the opinion of the law officers of the Crown had been given that, as English medical men could not be prosecuted in Scotland, and *vice versa*, under the lunacy acts for false certificates, it would be better to refuse their certificates for Scotch asylums. Still the sheriff was the sole judge in this matter, and it frequently happened that he accepted both English and Irish certificates.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLVI.—MEETING III.

Wednesday, 14th January 1885.—Dr ANGUS MACDONALD *in the Chair.*

I. *Dr Croom* showed a DECAPITATED FŒTUS, the subject of his communication.

II. *Dr Angus Macdonald* exhibited a DERMOID TUMOUR OF THE LEFT OVARY, removed from a girl of 21 years of age, on the forenoon of the meeting. The tumour was over three pounds in weight, was chiefly solid, composed of soft fibrous tissues, spaces filled with fat, and much osseous infiltration. Only at one or two points could hair be detected. The amount of bone contained in its structure, in the shape of isolated spicula, was so great that it was found nearly impossible to incise it with a knife. It contained one cyst cavity, from which was taken 12 ounces of a very dark, thick fluid, giving a dense deposit on heat and nitric acid, and presenting a density of 1038. The pedicle was short and thin, and had undergone two entire twists in the direction opposite to that of the hands of a watch. As the omentum was adherent, with part of the tumour and the small intestine, to its posterior surface, it is clear the twist must have occurred at a period antecedent to the formation of these adhesions. The patient believes she always had the tumour, but of late it has given rise to such pain that she was compelled to seek professional advice. (The patient has made an uninterruptedly good recovery.)

III. *Dr Halliday Croom* read a paper on a CASE OF DECAPITATION, which will appear in a future number of this Journal.

Dr Carmichael had had no experience of such cases in private practice. While in Vienna he had seen three cases of decapitation in the hospital. These were all done by means of Braune's key-hook. This, from the efficient way in which it performed its work, seemed to him a ready and useful instrument. The hook being passed over the neck and firm downward traction made, two or three turns of the handle were sufficient to sever the spinal column. He was struck with the ease with which the head was extracted. Cases of this sort were rare, but he would certainly adopt decapitation in preference to evisceration or other form of embryotomy.

Dr Craig was happy to say that he had never met with any case requiring decapitation in the course of his practice. As a student, he had seen two cases where the arm presented. The first was treated by Dr Andrew Inglis. In the other case, which occurred in the sister of the previous patient, bipolar version was performed by Dr Milne. Both patients did well.

Dr Milne Murray thought that Dr Croom had scarcely sufficiently emphasised the difficulties of the operation with the means which were at command. While the perforator was quite efficient in separating the bones of the spine, it was found that the separation of the ligaments was a matter of great difficulty, more especially that on the anterior surface of the vertebræ. The perforator could not be used on account of the risk of its slipping and wounding the mother's parts. Of course a pair of scissors with sufficiently long handles would have been invaluable, but they could not be had. With such an instrument the operation would be a simple one, and could offer no difficulty in such a case.

Dr Freeland Barbour had seen a maternity case some time since transversely jammed. The left arm was down, and fœtus was in left dorso-posterior position. The resident had tried to turn, and failed. Child was dead; no fœtal heart could be made out. The body of the child was soft and limp, and this enabled him to turn after some effort. With regard to the means for breaking up the child in cases of impaction, he had found that, in the tutorial class at least, the basilyst was an efficient apparatus, and was free from the risk of slipping to which Dr Murray had referred, as attending the use of the perforator.

Dr Angus Macdonald complimented Dr Croom on having brought forward a midwifery paper, a department in which the Society had been somewhat deficient of late. He had met with two cases of extreme difficulty on attempted turning. These were two cases of transverse presentations which defied turning. In one he performed evisceration, and delivered. It was, however, an objectionable and extremely dirty operation, and one which he would never again perform if he could avoid it. In the other case he performed spondylotomy, and has from its ease and efficiency a decided preference for the operation. Spondylotomy can be done best by means of a pair of long vaginal scissors. One blade should be sharp and the other probe pointed. It is a mistake to suppose that a very strong instrument is required. One cuts carefully through the skin, and then by means of the scissors divides an intervertebral disc. The principle of the operation is that we cut the bar represented by the axis of the fœtal body in such a way that the two cut ends over-ride, and so render the passage of the broken bar a matter of ease, although it was impossible to make the complete bar move inside the uterus. Dr Macdonald holds that spondylotomy is an easier operation than decapitation. It exposes no bones, and avoids risk of retention of the head. He recollected a case in which he was called to assist another practitioner, who had in turning detached the body from the head, which was retained inside the uterus. The brim was narrow, and there was much difficulty in delivering it. It had ultimately to be seized and withdrawn by the cephalotribe. Decapitation in a narrow pelvis might give rise to similar difficulty, not to speak of the possibility of injuring the uterus with the cut end of the bones. Spondylotomy removed the possibility of such an accident. Considering the ease with which it could be performed, and the advantages it presented, he felt that this operation had not received that amount of attention which it deserved. It ought to be recommended as a safe and simple operation.

Dr Halliday Croom thanked the Society for its reception of his paper. He was interested to hear from Dr Carmichael that he had seen the decollator at work. He quite admitted that with a pair of proper scissors spondylotomy was a safe and simple operation.

IV. *Dr Ballantyne* read a paper ON PULSE TRACINGS IN PUERPERAL ECLAMPSIA, which will appear in a future number of this Journal.

Dr Underhill had listened with much pleasure and profit to this paper of Dr Ballantyne's. The subject was a new one so far as he was aware, and he had no knowledge of any such tracings. It would only be when one had the paper in print that one could study it and appreciate its true value. He hoped Dr Ballantyne would continue these scientific observations. He had no doubt that they would throw light on this difficult subject, and, when published, would convey much information.

Dr Milne Murray complimented Dr Ballantyne on the skill and industry which has enabled him to get so beautiful a series of tracings. He agreed with Dr Underhill that it was impossible to pass an adequate judgment as to the value of the observations until the paper and tracings were printed, but he has no doubt that they would prove an important contribution to this subject. He was glad to see that Dr Ballantyne had got so good and regular results with Dudgeon's sphygmograph. This instrument, though at first despised by physiologists and clinical observers, was rapidly gaining in favour; and he failed to see why, with proper use, it should not yield results equal to those of Marey's instrument, while the ease with which it could be applied and kept in position rendered it infinitely more convenient. With regard to the tracings, he observed that the pressures recorded varied greatly, and he would like to ask Dr Ballantyne whether he had not taken a daily series under the same pressure, as then they would be specially valuable for purposes of comparison.

Dr Neve thought that there were two sets of fallacies apt to arise in the use of Dudgeon's sphygmograph in cases of eclampsia. *Firstly*, The risk of not applying the button of the instrument exactly over the artery. *Secondly*, The danger of communicated movements from the clonic spasms of the flexor tendons. There also arose, he thought, in connexion with these tracings, the question of altered blood pressure from the universal muscular contractions. He thought that while the majority of Dr Ballantyne's valuable tracings were free of the two first errors, that some specimens showed them distinctly. He had made some observations on himself, by stimulating the muscles of the arm, by means of a faradic current, and then applying the sphygmograph, when he obtained extremely irregular tracings. [Dr Neve produced some of these, which were handed round.]

Dr Barbour was much impressed with the value of Dr Ballantyne's paper. It was a field of investigation which had been little worked, but the virgin soil was full of promise. The question of blood pressure during labour and the puerperium was of great practical importance, and he hoped that Dr Ballantyne would extend his investigations to the action of chloroform and ergot in modifying this. He wished to say one word as to the value of Dr Neve's criticism. So far as he could judge from Dr Neve's tracings, he thought that they conclusively proved that whatever was the cause of the remarkable appearances in those prepared by Dr Ballantyne, they were in no sense due to muscular twitching, as Dr Neve's and Dr Ballantyne's tracings seemed to have nothing in common.

Dr Angus Macdonald had used Marey's instrument as altered by Galabin in the observations he had made on the pulse some years ago, and was fully alive to the difficulties and inconvenience of the instrument. It was impossible to make reliable observations with it during the incidence of a uterine pain, and its application could not be dreamed of during an eclampsic seizure. He congratulated Dr Ballantyne upon the number and beauty of his tracings. With regard to the results, it was satisfactory to him to note that they bear out the ideas he had previously entertained as to the character of the pulse in eclampsia—that is, that there was associated with the condition a small pulse of high tension, and which diminished in tension after delivery. So far as his observations went, the change in tension after delivery was not so great as Dr Ballantyne would seem to show. He was glad to note that a post-mortem had been obtained of one of the cases, and that the brain was to be examined. He had had great pleasure in listening to the paper, which he had no doubt would be even greater in the reading of it. He hoped Dr Ballantyne would continue his interesting observations.

Dr Ballantyne, in reply, said that he felt gratified at the kind reception given to his paper. With regard to the instrument used, he admitted the necessity of careful adjustment, and that some practice was required for its proper use. But there could be no doubt of its convenience in such cases, where the application of Marey's instrument was out of the question. He had now made with it more than four hundred tracings in obstetric cases, and these he hoped to bring before the Society at a future meeting.

CARLISLE MEDICAL SOCIETY.

MEETING IV.

Thursday, March 12, 1885.—Dr LOCKIE, *Vice-President, in the Chair.*

Dr Lediard showed the following patients:—(1.) PARALYSIS OF BOTH ARMS, FOLLOWING A FALL ON THE HEAD. The man had fallen on his head, Nov. 17th, from a height of 10 feet. He had a large scalp wound, but was conscious, and had no evidence of injury to the brain. The arms and legs were completely paralysed; the breathing abdominal, and there was paralysis of the bladder. He could move the lower limbs slightly within twenty-four hours, but the arms recovered more slowly. At present there was paresis in the muscles of both arms, most marked in the deltoids and the extensors of the forearms. There had been evidently hæmorrhage in the spinal canal, either from a rupture of ligaments or a fracture without displacement. (2.) ACUTE INFILTRATING CANCER OF BREAST. Woman, age 36, with a general brawny infiltration of the left breast. The nipple was retracted; mass of enlarged glands in axilla. Œdema of the left arm, hand, and sub-clavicular region. Tumour had been first noticed three months ago.

Dr Lockie showed the LUNGS, LIVER, KIDNEYS, AND BRAIN of a patient who died of acute tubercular meningitis.

Dr Greenlees showed a TUMOUR OF BRAIN, evidently sarcomatous. It occupied the middle line, involving equal portions of both hemispheres, and occupying the anterior portion of the lateral ventricles, and growing from corpus callosum. Size of a large hen's egg.

Dr Macdougall read a NOTE ON THE PREPARATION AND DIETETIC USES OF KOUMISS. He had used koumiss for fifteen years. He had found it of the greatest value in cases of intractable vomiting, as in Bright's disease, and the vomiting of neurotic women; also in gastric neurosis, in gastric ulcer, in phthisis, and in diabetes. It contains all the elements of pure milk, more or less altered by fermentation. It contains a large proportion of lactic acid, and the casein in such state as best admits of its metamorphosis into peptones. The patient can prepare koumiss for himself at a fraction more than the primary cost of the milk. The directions are simply these:—That he should place, in the bottom of a perfectly clean and dry quart bottle, a piece of fresh German yeast, the size of a small bean, and half a teaspoonful of white powdered sugar. New milk, warm from the cow, or heated to a temperature of 60° F., is now added, until the bottle is filled, with the exception of a few inches from the top. Bottle is firmly corked and secured like a bottle of soda water. It is placed in cold weather in an atmosphere of about 50°; in summer in the coolest place in the house. Twice or three times a day it is violently shaken. At the end of five to six days in winter, and three in summer, it will be ready for use, and this constitutes the A. koumiss, that is a koumiss containing the maximum of casein. By keeping it another five days, you get the B. koumiss, which contains more lactic acid, lacto-protein, and phosphates, and with the casein in a state of further metamorphosis. This form is decidedly more digestible than the other, and is to be preferred in cases of vomiting associated with feeble digestion. Further keeping produces the acid and astringent whey koumiss, valuable in assuaging thirst in diabetes, and as an astringent in chronic diarrhœa. Koumiss is a palatable and pleasant drink, and though many may reckon it an acquired taste, it is very readily acquired.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

The Active Principles of Ergot.—In the *Therapeutic Gazette* for February the following conclusions are stated as arrived at by Dr Marckwold of Berlin:—1. Ergotinin is useless as a therapeutic agent for the purpose of causing uterine contractions. 2. Sclerotinic acid has hæmostatic powers to a sufficient degree to deserve its employment for obstetrical and gynæcological purposes. But its use is unfortunately precluded by the fact that both the acid and its salts are not suited for hypodermic use. 3. Ergotin having all the advantages without the disadvantages of sclerotinic acid, is the only reliable therapeutic agent of all three preparations of ergot. When well purified and dialyzed it can be preserved well, and a uniform action looked for from it. When diluted, shortly before its use, with a weak solution of chloride of sodium, which is far less irritant to the cellular tissue than water, and absolutely void of irritation to the mucous membranes, pain and the risks of abscesses will be reduced to a minimum.—*Arch. f. Anat. und Phys.*, Berlin, 1884.

Euonymin.—Rowen has investigated the physiological action of euonymin, a crystalline glucoside prepared from the bark of *Euonymus atropurpureus.* In cats the drug causes reduction of the frequency of the pulse, and increase of cardiac energy and blood-pressure—in other words, the characteristic action of digitalis. It is peculiarly adapted for hypodermic injections, as it causes neither swelling nor irritation at the point of application. Hence it might advantageously displace preparations of digitalis when administration by the mouth is contraindicated and an instantaneous powerful action is desired. A notable and not yet fully investigated property of euonymin is to cause a very protracted influence on the heart when given internally in one large dose. Thus the ingestion of 1-8th grain, and two days after of 1-4th grain, in a cat produced a reduction of the pulse from 140 to 96 beats per minute, lasting nineteen days after the exhibition of the drug (*St Petersb. Klin. Woch.*, 48, 1884).—*Therapeutic Gazette*, 16th Feb. 1885.

EUPHORBIA PILULIFERA.—The capital symptom calling for this new remedy is paroxysmal spasmodic dyspnœa. From whatever cause this may arise the relief obtained from the euphorbia seems to be speedy and certain. Dr Tison gives favourable reports of this medicine in dyspnœas of cardiac origin. I have had no personal experience with it in such cases. In all my patients the heart and kidneys seem to have been sound. The euphorbia pilulifera has not seemed to have any action on the cough and expectoration in chronic bronchitis, nor has it seemed to modify the râles of humid asthma. In the uræmic asthma of renal disease it would seem theoretically to have little power, although as a general respiratory stimulant it may here render service, as in the paroxysmal dyspnœa of pertussis, spasmodic laryngitis, and angina pectoris. I have not observed the tonic and slightly narcotic properties noticed by Dr Matheson. Euphorbia acts in two ways—locally on the stomach (as seen in experiments on animals), and after having been absorbed, on the respiratory functions. The topical gastric effect probably exists in man, since the subjects of several of the observations experienced a degree of nausea, with epigastric pain, after taking the tincture or aqueous extract. These symptoms disappeared with suppression of the medicament. I was inclined to refer these symptoms to the local effect of the medicine rather than to any trouble in the functions of the vagus. In animals euphorbia has been shown to modify the respiration and circulation. In the necropsy lesions have been found, comparable to those which follow death by section of the vagi nerves. In the human subject in an affection which seems especially to depend on a particular neurosis of the pneumogastric, you obtain by administration of the drug a remarkable sedation of the spasmodic symptoms, and of these only. We seem, then, justified in concluding that the good results of the euphorbia are due to a particular modification of the functions of the pneumogastric, and that it is rather on the medullary centre of this nerve than on the nerve itself that it acts. The active principle is soluble in water and dilute alcohol. To avoid irritation of the gastric mucous membrane it is well to employ a considerable quantity of the aqueous vehicle, and to give the remedy immediately after or in connexion with meals. The aqueous or hydro-alcoholic extract is a good preparation; it keeps well and is easy of transport

I have never exceeded a dose of ten centigrammes (two grains); generally five centigrammes produces a marked effect. The dried plant in decoction is a good form of administration. Half an ounce to two quarts of water is the proper proportion. Two or three ounces of dilute alcohol may be added to keep it from spoiling. The dose would be three or four wine-glassfuls a day. In the service of Dr Beaumetz the tincture was often employed in doses ranging from 10 to 30 drops. One gramme of this tincture represents five grammes of the plant. 1. The active principle of euphorbia pilulifera is soluble in dilute alcohol and water, insoluble or but little soluble in ether, chloroform, disulphide of carbon, and essence of turpentine. 2. It is toxic in small doses to small animals, killing them by arrest of the respiratory movements and cardiac pulsations, which are first accelerated, then slowed. 3. Its effects are not cumulative. 4. It seems to act directly on the respiratory and cardiac centres. It leaves intact the other organs. 5. It seems to be eliminated by the liver. 6. Locally it is without action on the skin and mucous membranes, except the gastric mucous membrane, which it irritates. 7. It gives good results in attacks of dyspnœa caused by spasmodic asthma, emphysema, or chronic bronchitis. It ought to be employed in daily doses corresponding at the most to one gramme of the dried plant, and should be taken, well diluted with water, at meal-times. (By Dr A. Marsset, Paris, France.)—*Therapeutic Gazette*, 16th Feb. 1885.

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D., and WILLIAM RUSSELL, M.D.

ETIOLOGY AND PROPHYLAXIS OF RACHITIS.—Cornby in this paper contends that improper feeding is the cause, and the only cause, of rachitis, and insists on the importance of the profession fully realizing this. Among primitive and savage peoples the disease is said to be unknown, as they have preserved intact those instincts which civilisation has tended to pervert. Artificial feeding is the most fertile cause of rachitis. Feeding bottles of all kinds are condemned, especially the bottle with the long tube, which is commonly used here and in France; and instead, a glass or cup or spoon is upheld as the best vehicle when artificial feeding is absolutely necessary. Mixed feeding, partly from the breast and partly by the bottle, is equally condemned. He asks if infants who are being suckled naturally may become rachitic, and answers in the affirmative. They become so by the mother giving them the breast at any hour of the day or night if the child cries, in order to stop the crying. Thus the stomach becomes overcharged, and cannot digest its contents; and then follows colic, diarrhœa, gastro-enteritis, and dilatation of the stomach followed by rachitis. Any addition made to the normal nourishment before the child is a year old, also premature weaning, are apt to produce the condition. Under prophylaxis he places the natural process of suckling as the most effectual preventive. The child should be put to the breast six or seven times in the twenty-four hours. Where it is necessary to resort to mixed feeding the child should receive its other nourishment from a cup or a glass, it should consist of milk, and there should always be an interval of three hours between its repasts. If the feeding is exclusively artificial, 100 to 150 grammes of milk, nearly pure and lukewarm, should be given six or seven times a day. On no conditions whatever is the child to have anything but milk before it is a year old.—*Archives Générales de Médecine*, March 1885.

PRIMARY RENAL CONGESTION.—M. Albert Robin, in an able clinical lecture, delivered at the Hôpital de la Pitié, attempts to differentiate and to define this form of renal affection. He contends that the term Bright's disease should be limited to cases characterized by "albuminuria, dropsy or œdema, coexisting with a renal lesion," and that interstitial and arterial nephritis, amyloid and fatty degeneration, should not be included in it, and that the term should be confined to the lesions which are called parenchymatous. The affection is ascribed to exposure to cold following upon muscular effort. It is characterized by pyrexia, headache, general malaise, pain in the back, accelerated pulse; and sometimes there may be diarrhœa and even epistaxis. The pain over the kidneys is increased by pressure, and there may be some diffused abdominal tenderness. More rarely there may be slight vesical sensitiveness or slight dysuria. There is never any œdema. The condition of the urine is the most important means of diagnosis. Its colour is that of boiled beef with a reddish hue. It is rarely transparent, but usually cloudy or muddy. The odour is insipid, and resembles that of boiled bread. The reaction is acid. The quantity slightly diminished. The density varies from 1020 to 1026. On standing there is an abundant sediment of a brown or brownish-red colour, and contains tube casts, which are hyaline or epithelial, some finely granular, others containing red corpuscles or pigment granules; also red corpuscles more or less altered; white corpuscles charged with pigment granules; some free cells of renal origin, also containing pigment; masses of amorphous black pigment; and sometimes uric acid crystals. Albumen is present from the outset, but its rapid disappearance is one of the characteristics of the condition. There may be slight and evanescent reappearance of the albumen during the course of the illness. The urine further gives the reactions of indican at the outset of the affection. The course of the disease is rapid. After some oscillations the temperature falls to normal, and the general symptoms diminish with or without a critical perspiration. The renal sensibility persists for some time longer. The indican reaction disappears. The urine regains its normal colour, and the brown sediment disappears and is replaced by uric acid crystals. The more simple form of the affection lasts a few days; but a more severe form, spoken of as the typhoid form, lasts for about two weeks. All the cases he had seen ended in recovery. The condition is to be distinguished from catarrhal nephritis, which has a similar onset and rapid course marked by the presence of albumen; in the congestive form the urine always contains red blood corpuscles, pigment masses, and dissolved hæmoglobin, whilst it only appears exceptionally and transitorily and in small quantity in catarrhal nephritis. There is also commonly some slight œdema in the catarrhal form, never in the other. It is distinguished from paroxysmal hæmoglobinuria by the presence of blood corpuscles and by a different clinical course. The treatment he has found useful is dry cupping over the loins, and abundant diluents, especially milk.—*Gazette Médicale de Paris*, 14th, 21st, and 28th February 1885.

DIABETIC NEURALGIA.—Dr Florain details an interesting case under this title. The patient was a married woman, aged 44. She had never been ill. Before and during her last pregnancy she experienced intolerable pain, coming on during the night after an hour or two of sleep, and completely disappearing in the morning. She compared the pains to the prick of pins. They began in the left hand, after which the corresponding fingers of the right hand were seized, until all the fingers were affected, the pain spreading systematically. During her confinement the pains disappeared completely, but some months after .that the pains reappeared in the same order as before. As soon as she went to bed she experienced most intolerable formication in the fingers, and had to get up and walk about her room. During the day the pain subsided, but the fingers remained engorged. She had been treated with quinine, valerianate of zinc, and bromide of potassium without any benefit resulting. When the urine was examined, it was found to contain sugar, and the saliva was acid. The patient was forthwith dieted and put on alkaline treatment. The hands were faradized twice a week. A strong current was passed into acidulated water in two zinc basins, and the patient placed her hands in the water for twenty minutes each time. Under the treatment the pains gradually diminished in intensity and finally disappeared, while the sugar in the urine was reduced to a mere trace.—*Gazette Médicale de Paris*, 28th Feb. 1885.

KÜSSMAUL'S COMA.—Saundby has recorded two more cases of this affection. One occurred in a man who had received a strain of his back and a contusion of his abdomen, which were followed by diabetes with signs of phthisis. He had obstinate constipation. Three weeks after admission, as he complained of faintness, his urine was tested with ferric chloride, and gave a well-marked colour reaction which disappeared on heating. A few weeks later, one evening he said he was feeling very tired, and complained of sharp pain in the left side of the chest with difficulty of breathing. This was relieved by hot fomentation. The following day he was still tired and *drowsy;* his hands and feet were cold. Towards evening *his respirations became deep and sighing,* he was cold and drowsy, but could be roused, and answered questions intelligibly. He died quietly at 7 A.M. There was no unusual smell on opening the body, but the blood which ran out as the organs were removed was of a milky purple colour. On standing it looked like black currant juice on which cream was floating. Under the microscope the cream-like layer consisted of finely molecular matter, entirely soluble in ether. Some of the blood was distilled by MacMunn, but no *acetone* could be detected in the distillate. The lungs, liver, and kidneys were examined microscopically for fat embola. The lungs presented no branching embola, but in some cases the capillaries contained droplets of fat large enough to occlude the lumina of the vessels. The liver capillaries contained numerous similar droplets. The connective tissue of the liver around the ducts showed some infiltration with round cells. The kidneys were very slightly fatty, some tubules contained hyaline casts, and there was some increase of connective tissue around the larger veins. The capillaries contained very few fat droplets on the whole; by far the largest amount of fat was seen in the capillaries of the liver, and this to such an extent as to suggest very strongly that it was formed there. The absence of branching fat embola agrees with Saundby's previous observations, and he repeats what he and Barling stated three years ago, that these droplets are in all probability post-mortem appearances, produced by the coalescence of fat which, during life, existed in the form of a very fine emulsion. There was no glycogenic change in the heart. The second case was one of Bright's disease with cystic affection of one kidney, in which a convulsion occurred, followed after the lapse of fourteen hours by death, in spite of the intravenous injection of 24 ounces of neutral solution of sulphate of soda of sp. gr. 1018, and at 100° Fahr. The note of the urine taken on the day of her death says, — Colour reddish-brown, putrid, alkaline, deposits one-third column of pus; sp. gr. 1011. *Gives a deep brown colour with ferric chloride,* not diminished by heating. Albumen about one-third column. No sugar. Deposit under the microscope consisted of granular cells, squamous and pyriform epithelium, bacteria, and blood corpuscles. These two cases illustrate very well the group of symptoms first described by Küssmaul, and to which the Germans, with laudable precision, give the very unimpeachable name of Küssmaul's complex of symptoms (symptomen-complex), for in neither of these cases was true coma present. In his summary of symptoms Küssmaul speaks of the following:—1. A peculiar dyspnœa; 2. Rapid heart's action; 3. Groaning, screaming, jactitation, and pain; 4. Normal or subnormal temperature; 5. Abundant urine containing sugar; 6. Contraction of pupils (in 2 cases); and 7. Paralytic distension of the stomach. Curiously, there is not a word about coma, or of any peculiar smell of the breath. Saundby is inclined to accept the view that Küssmaul's coma, using a convenient though inexact term, is not restricted in its occurrence to cases of diabetes, but may be met with in several other diseases, especially in those in which the state of the blood has undergone profound pathological alteration. With regard to chemical reaction, if a solution of ferric chloride is added to urine, in certain cases a reddish-brown or Burgundy red colour is produced, which disappears on heating or acidulation, but what this substance is must be considered as still an open question; it is neither acetone nor diacetic ether, and it is not certain that it is aceto-acetic acid. In making use of the ferric chloride test it is necessary to remember that heat darkens a solution of ferric salts, so that though heat may dispel the colour caused by the presence of the abnormal urinary constituent, the fluid will be finally darker than it would be by the addition of ferric chloride to a normal urine, without heating. It is very important not to omit the application of heat, as other substances give the same colour distinguished only by its persistence on heating. Besides these chemical difficulties, clinical observation has shown that this reaction has a very widespread range of occurrence, and that its presence *per se* is of no special clinical significance. 1. It has been observed in many acute diseases, *e.g.*, measles, scarlatina, and pneumonia, without any symptoms of coma being present. 2. It has been noticed in a variety of other conditions, such as cancer, chronic Bright's disease, perityphlitis, strangulated hernia, after minor surgical operations, and in sulphuric acid poisoning, without any dyspnœa or coma. 3. It has been present in the urine of diabetics for weeks and months without coma or dyspnœa supervening. 4. It has been observed in the urine of a patient dying from coma, with cancer of the stomach, in whose urine acetone and diacetic acid were present, but no sugar. 5. It was observed by Litten in a post-scarlatinal patient, who presented symptoms resembling those described by Küssmaul. Litten speaks of the condition as "dyspeptic," but albuminuria was present, and the case was complex. 6. It has frequently been observed in the urine of diabetics during or just before the onset of the peculiar terminal dyspnœa. A great difficulty in the way of accepting the view that acetonæmia is the cause of these toxic symptoms is, that it has not been proved that acetone is capable of giving rise to such physiological effects. Küssmaul obtained results which were of a not very decided character, but more recently Salomon and Brieger have shown that acetone in large doses produces no effect on animals or men, even on diabetic patients! while the urine of the subjects of these experiments had no smell of acetone, gave no reaction with ferric chloride, nor any of the chemical reactions of acetone, so that it appears the acetone was destroyed in the body. In spite of the negative results of most post-mortem examinations, an attempt was made by Sanders and Hamilton to find a structural basis for these symptoms. Their view, as is well known, is that the respiratory and nervous phenomena are caused by fat embolism of the pulmonary and cerebral capillaries. They based this theory on the results of the post-mortem examination of one case of diabetic coma, in which the blood was very fatty, and fat embola were found in the lungs and kidneys. It is curious that Küssmaul's first case had also fatty blood, and the lungs presented numerous small infarcts, respecting which he remarks, "Perhaps we might attribute to the lipæmia and fat embolism the numerous small lung infarcts, at least another source of embolism was not to be discovered. *In no case could the fearful terminal dyspnœa have originated in the small infarcts, the greater part of which were of far older date.*" Thus this theory had not escaped the notice of Küssmaul, though he merely noticed it to dismiss it. Lipæmia is only exceptionally present in diabetic coma. As regards treatment in the early stages, Saundby recommends energetic means to obtain an evacuation of the bowels, combined with the administration of stimulants and alkalies by the rectum. Should these fail, I think we should always try the effect of an intravenous injection of a saline solution. —*Birmingham Medical Review*, February 1885.

MYO-HÆMATIN, HISTO-HÆMATIN, AND THE SPECTRUM OF THE SUPRA-RENAL BODIES.—MacMunn, of Wolverhampton, has demonstrated his recent discoveries in animal pigments. He shows that the colour of muscle is not due to hæmoglobin, as has been so long accepted by physiologists on the strength of Kühne's statement, but is due, at least in part, and in most cases, to an intrinsic and distinct pigment to which he gives the name myo-hæmatin. This myo-hæmatin belongs to the group of colouring matters which he calls histo-hæmatin, and which he finds to be widely distributed in the animal kingdom. The spectrum of the supra-renal bodies gives the characteristic bands of hæmo-chromogen, which he has only found in the bile and liver. He regards it as an excretory product of downward metamorphosis of blood pigment; and he justly thinks this suggestion of the function of the supra-renal bodies as excretors of effete pigment, throws light on their relation to Addison's disease.—*Birmingham Medical Review*, March 1885.

THE TREATMENT OF HYSTERIA BY ISOLATION.—Professor Charcot, in an interesting clinical lecture, deals with this subject. The lecture was based on three cases occurring in the children of one family, where the disease had been induced by their presence at prolonged spiritualistic *séances*. The condition was so pronounced that a seizure in one was followed by a seizure in all, and this sort

of thing was repeated many times daily. The children were removed to hospital and their parents not allowed to visit them. They rapidly recovered, mainly, Professor Charcot believes, owing to their removal, but they were likewise treated with bitter and ferruginous tonics and static electricity. He considers the bromides and antispasmodics as of no value in these cases. He also gives a case in which the patient, a young girl, was reduced to little more than a skeleton, and in which the parents were induced to submit to his insisting on removal and isolation only as a last resort. The patient was rapidly and completely cured. He believes that isolation is the main factor in effecting the cures obtained by the Weir-Mitchell method of treatment.—*Le Progrès Médical*, 28th February 1885.

SURGICAL PERISCOPE.

By A. G. Miller, M.D., F.R.C.S.E.

The *American Journal of Medical Sciences* for October 1884 contains several valuable articles, of which we notice the following:—

I. Cholecystotomy, by Drs Musser and Keen.—Dr Keen in giving the surgical view of the subject recommends acupuncture as an aid to diagnosis in these cases of gall-stone. Aspiration he considers risky, but acupuncture safe. The former operation may, however, be necessary in some difficult cases before any more serious operation is attempted. In using acupuncture he recommends, if the first puncture is not successful in detecting a stone, that fresh punctures should be made at different points rather than that the needle should be worked about in search of the concretion.

In regard to the operation (of opening into the gall-bladder), Dr Keen says that every such operation must be looked upon as "in a certain sense one of exploration." In consequence of this view he is of opinion that operative procedures should be adopted more frequently than was the practice formerly, and much earlier. In his opinion "exploratory opening of the abdominal cavity is one of the safest operations in surgery." He takes care, however, to add "under antiseptic precautions." This he does notwithstanding the opinions and experience of Keith and Lawson Tait. At such a statement we should not be astonished when we remember that long before antiseptics were practised, when even washing the hands before an operation would by some have been considered an unnecessary waste of time, we were in the habit of thrusting our forefingers into the abdominal cavity when operating for strangulated hernia, and often did so with perfect impunity. Remembering this, we can perfectly understand why Thomas Keith and Lawson Tait and others can handle the peritoneum without any fear of the consequences when they have thoroughly cleansed their hands, sponges, and instruments. We would take this opportunity of stating that it is our personal opinion that the peritoneum is not very susceptible to septic infection, and is therefore not a good test of the necessity for antiseptic surgery. As proofs of this statement we would point to the facts above stated, the impunity from septic peritonitis after hernia operations, and after operations performed by Messrs Keith and Lawson Tait.

Dr Keen describes four different methods by which the gall-bladder may be opened for the purpose of removing obstructing gall-stones.

1. Simple incision where suppuration has taken place, and inflammatory adhesion to the abdominal parietes.

2. Operations by caustics to promote adhesions. Such operations he justly condemns as a waste of time, needlessly painful, and unsurgical.

3. Operations performed *au deux temps*, in which the abdominal wall is opened, and its adhesion to the gall-bladder secured before the latter is opened. This style of operation he also condemns as unnecessary.

4. Direct opening into the gall-bladder. He recommends that the incision should be made directly over the distended organ, parallel to the free border of the ribs. An incision in the mesial line would give less hæmorrhage, but would not be nearly so convenient, and after all the hæmorrhage is no great matter, being only from muscular branches which are easily secured. Vessels having been ligatured, the peritoneum is carefully opened, and two fingers inserted to ascertain the condition of the various organs within reach and the exact position of the gall-bladder. The condition of the cystic duct and the common duct should be specially examined, and if gall-stones are found in either of them they should be pushed on into the duodenum, and thus any further cutting may be prevented. The bladder may then be punctured, and its fluid contents drawn off, when the presence of concretions will be more easily made out. If these are found the bladder may then be incised and cleaned. If the incision be made when the bladder is distended, escape of some of the fluid contents into the peritoneal cavity may occur, which is more easily prevented by tapping first. After incision the gall-stones may be removed with fingers or forceps. If there is one large concretion it may be first broken down and then removed. Sometimes it is not possible to remove all the stones, or even discover them. On account of this, and for other reasons, Dr Keen recommends that the bladder walls should be secured to the external wound — peritoneal surfaces being accurately brought together, and a fistula established. This fistula, he says, heals in a few weeks, "in marked contrast to the fistulæ following nature's method of adhesion and external discharge."

In regard to the matter of hæmorrhage we would quote the following paragraph *in extenso* on account of its importance:—"The experience of operators has varied very much as to hæmorrhage. In two of my operations this has been a formidable danger, not so much by the vessels wounded as by the tendency to profuse and uncontrollable oozing even from inadvertent needle-pricks. This seems to be due to the condition of the blood in those cases in which the long-continued jaundice has disorganized that fluid. The liver, also, in such cases is softened, and its integrity almost destroyed. Both of these facts are strong arguments in favour of an early rather than a late operation. Many lives will be saved in the future by such an early resort to abdominal section. The hæmorrhagic tendency in such cases should make us careful not to excise any portion of the wall of the gall-bladder. I see no object worth the risk of such a procedure, and where it entails additional danger it should certainly be avoided."

Dr Keen further remarks:—"Still another question is raised by Langenbuch's successful case, viz., the propriety of the entire removal of the gall-bladder after ligation of the cystic duct, and evacuation of the gall-bladder (if distended) to prevent the escape of its contents into the peritoneal cavity. Tait says that this has been done six times, with three deaths. As a general rule, we should be opposed to such a removal; true, some animals have no gall-bladder, sometimes it is congenitally absent in man, and sometimes it has been removed (as by Langenbuch), or has been functionally absent when all its bile has escaped by a biliary fistula. The only object in removing a gall-bladder is to prevent the future formation of stones; and hence, as in Langenbuch's case, it is rather a remedy to be applied to chronic and repeated cholelithiasis than to any ordinary case of acute and unwonted obstruction. Moreover, the danger from an unremoved or undiscovered stone, if it be in the common duct, is too great to justify such a removal, unless it is clear that the duct is patulous. Even severe cases of inflammation of the gall-bladder, the result of calculi, are readily cured by the removal of the calculi, and the establishment of a temporary fistula. It seems as a rule, therefore, needless to add to the already sufficient dangers those which may follow the extirpation of this organ.

"One other possibility exists. If we are sure that no calculi remain in the gall-bladder, it might be possible, instead of establishing an external biliary fistula, to open the small intestine at as high a point as possible below the duodenum, and by sutures unite this opening to that made in the gall-bladder, thus re-establishing the flow of bile into the intestine. Von Winiwarter (*Prag. Mediz. Woch.*, No. 21, 1882) attempted this procedure with partial success. New dangers would attend it, but in a favourable case it might be worth at least a trial. Clearly nature meant that the bile should enter the small intestine high up, and play its rôle in the digestive process. If, by art, we can re-establish the disordered process without too much danger in the doing it, it should be our aim."

II. CASE OF SUBSCAPULAR ABSCESS. Reported by Dr Blodgett, Boston.—This is a very remarkable and interesting case in which an abscess occurred under the scapula (from injury), burrowed along between the seventh and eighth ribs, passed downwards into the abdomen, and opened into the intestine, without causing necrosis of the ribs or peritonitis.

III. CASE OF RESECTION OF THE PYLORUS FOR CARCINOMA. By Dr Randolph Winslow of Baltimore.—The operation, which lasted three hours, seems to have been considered a great success; but, "in spite of hypodermic injections of whisky, she died two hours after being put to bed. The greatest care was exercised in thoroughly carrying out antiseptic details during the operation." Comment is unnecessary.

IV. ON CALCULUS IMPACTED IN THE URETER, AND THE FEASIBILITY OF REMOVING IT BY SURGICAL OPERATION. By Henry Morris, A.M., F.R.C.S., London.—Mr Morris states that in 34 volumes of the *Transactions of the Pathological Society of London* he has been able to find only eight cases recorded of impacted calculus in the ureter. In the half of these the impaction was at the vesical end. His object in writing the present paper is to recommend that in such cases an attempt should be made to relieve the impaction by cutting into the bladder, or dilating the urethra in the female, and removing the calculus by incision or otherwise. Mr Morris records one case,—a female, in whom he made a digital examination of the bladder, discovered a calculus "impacted in the lower end of the left ureter," which, however, he failed to extract, and the patient died "within three days." In such cases, of course, especially in males, the principal difficulty is diagnosis. Unfortunately Mr Morris tells us that in answer to the question, "What are the symptoms?" it is "impossible to give a satisfactory reply." "There are no certain means of determining whether a calculus, when present, is in the pelvis of the kidney or in the ureter." He adds, however, that the condition under consideration may be strongly suspected if, in addition to the ordinary symptoms of calculus, "the pain is referred lower and lower along the course of the ureter, and the bladder becomes the seat of pain and irritability." To this may be added a diminution of the quantity of urine and the absence of a calculus to be felt in the bladder. In concluding his article Mr Morris recommends that exploration of the bladder should be made with the object of performing an operation on the lower end of the ureter—"(1.) In hydronephrotic or pyonephrotic enlargement of the kidney, associated with bladder symptoms, with the hope of re-establishing the natural drainage through the ureter; (2.) Before nephrectomy is resorted to for hydronephrotic or pyonephrotic tumours, which have been opened or tapped through the loin without benefit; (3.) Before nephrectomy is resorted to in cases of suspected renal calculus, in which no renal tumour exists, and where after digital exploration and puncture of the kidney through the loin, no stone is found; (4.) In cases of sudden or rapid suppression of urine, or anuria, occurring after symptoms which have given rise to suspicion of stone in one or other or both kidneys."

The following is the mode of operating recommended by Mr Morris for the removal of a calculus from the lower end of the ureter:—"Having rapidly dilated the urethra if the patient be a female, or opened the urethra in the median line immediately in front of the prostate if the patient be a male, the neck of the bladder should be passed by the index finger of the left hand, and a careful digital examination made of the bladder walls. If a hard fixed body be felt covered over by the bladder mucous membrane, at or near the orifice of one of the ureters, a gum-lancet shaped knife on a long slender shank should be introduced along the left index finger, and with it an incision should be made through the tissue covering the calculus. The knife should then be carefully withdrawn, and a slender scoop or curette introduced along the index finger of the left hand still retained within the bladder should be employed for gently turning the calculus out of its bed. Whilst using the scoop, as well as in making the incision, the nail of the left index finger, or the pulp of the finger itself, should be employed in fixing the calculus so as to prevent its slipping away from the orifice of the ureter, or even for pressing it downwards and forwards in the direction of the obliquity of the ureter."

TRIPLE PRIMARY MAJOR AMPUTATIONS IN A BOY FOUR YEARS OF AGE; RECOVERY.—Dr J. B. Armstrong, Chicago, Illinois, reports the case of a boy, four years of age, receiving railroad injuries necessitating immediate amputation of, first, the right leg at the tuberosity of the tibia; second, the left thigh through its upper third; and third, the left forearm, just below the elbow-joint. There were also extensive contused lacerations of the scalp. The case did nicely until the sixth day, when the thyroid gland became enlarged to such an extent as to interfere with deglutition. Aside from this latter rare complication, the child made a quick and perfect recovery. "He has a peculiar mode of getting about. Reaching out with the hand, he jumps off the hip to the distance measured, similar to the gait of a rabbit, and by a rapid repetition of this act manages to locomote with comfort and satisfaction."—*Archives of Pediatrics, N. Y.*, 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

VARIOLA IN BUENOS AYRES AND AMONG THE INDIANS.—Dr Boldonero Sommer states that, as the Argentine Republic has not adopted compulsory vaccination, the city of Buenos Ayres is frequently visited by smallpox, the Indians being frequently the introducers. These are not vaccinated, though endeavours are being made to do this now; and so susceptible are they to the disease, that nearly every Indian who passes a town in which there are cases of smallpox contracts it. The Indians naturally fear the disease, for 95 per cent. of the unvaccinated among them die when exposed to it. The protective influence of vaccination among them is well marked; those who have been vaccinated seldom take smallpox, and then in a very mild form. The hæmorrhagic and confluent forms are those which chiefly affect the native Indians; the eruption in them develops very slowly, perhaps because their skins are thicker, and less easily perspire. Dr Jose Penua, the director of hospitals for epidemic diseases in Buenos Ayres, has had good results from the administration of essence of turpentine in hæmorrhagic smallpox. He gives one drachm and a half in a solution of gum daily, and has, in consequence, not only caused a cessation of the bleeding by this, but even cured some cases.—*Monatshefte für praktische Dermatologie*, December 1884.

RESORCIN IN ICHTHYOSIS.—Andeer, continuing his researches in resorcin, has had good results in a case of ichthyosis. This affected a girl of six, and had reached a moderate degree of development. Those parts less severely implicated were anointed with a three per cent., those more severely with a 5–20 per cent. resorcin butter ointment, and enveloped in cotton wool. After eight days the disease had disappeared, and the itching, which had been previously annoying, had ceased. No resorcinism appeared, though the urine had an olive-green fluorescence. Examined some time after, the skin remained well, except two small islets, which had purposely been left untreated. These were permitted to continue, so that it might be seen if the disease spread anew from them.—*Monatshefte für praktische Dermatologie*, December 1884.

ICHTHYOSIS AS AN ENDEMIC DISEASE.—Jablonowski says that this is hereditary, and is as such met with nearly exclusively in two Albanian tribes, "Mirídites" and "Toska," which live on the coast of the Adriatic. Ichthyosis commonly affects weak, marasmic persons. Besides heredity, other circumstances are blameworthy, as defective cutaneous hygiene, dirty woollen underclothing, local conditions of soil and dwellings. The numerous cases observed by the author presented themselves in two forms, as white and brown, the latter particularly in woman. Usually the disease implicated the entire surface, the face even not being excepted. The circumstance was remarkable that in the vicinity of Elbasan and Beret even the youngest children were affected. A decided improvement occurred in women during menstruation. The disease was not encountered in the towns. Treatment was absolutely futile as regarded permanent cure. A temporary, though frequently only a very slight, amelioration resulted after prolonged and sedulous treatment. Arsenic was freely given internally. Externally general baths in Provence oil of a duration of not less than two to three hours proved most efficacious. After each bath inunctions with a strongly alkaline soap were practised. Such a mode of management was instituted in the military hospital in the case of Albanian recruits. The scales disappeared, and the aspect of the skin became normal; but so soon as the soldier was discharged, the disease reasserted itself.—*St Petersburgher Medizin Wochenschrift*, No. 40, 1884.

THICKENED EPIDERMIS TREATED BY SALICYLIC PLASTER.—Dr Thin records some interesting cases of thickening of the epidermis of the palms and soles treated by the salicylic plaster muslin of Unna of Hamburg. The plaster seems applicable to all cases where there is a hard, dry overgrowth of the horny layer of the epidermis, as in the callosities met with on the hands and feet, in warts and in corns. The plaster requires to be changed once in three or four days, and the application is painless.—*Clinical Society's Transactions*, vol. xvii.

UNGUENTUM HYDRARGYRI AMMONIATI.—The German Pharmacopœia is being revised, and Mielck of Hamburg makes the following suggestions with respect to the white precipitate ointment. He disapproves of the substitution of vaseline or paraffin for the animal fats formerly in use, as the former are not absorbed by the skin, though having the advantage of not becoming rancid. The precipitate of ammoniated mercury, which falls when a solution of corrosive sublimate is mixed with one of caustic ammonia, is a smooth and delicate one, but soon dries if exposed into hard masses, difficult to pulverize. This is seldom, he says, perfectly done, and hence if the ammoniated mercury ointment be spread thinly on a glass plate, fragments of the white precipitate can be seen. He recommends, therefore, that the white precipitate be kept in an incompletely dried state, and that from its minute subdivision a less amount will produce a more active effect. The washed precipitate should be dried under an air-pump, or on bibulous paper, till the stiff paste consists of 55 per cent. of ammoniated mercury and 45 per cent. of water. With this so much glycerine is mixed that the whole contains one-third of dry precipitate. This can be combined with salves in suitable proportions when required.—*Monatshefte für praktische Dermatologie*, January 1885.

PEDICULI CAPITIS.—Denslow recommends the tincture of Delphinium staphisagria as a cleanly and efficacious remedy when the use of kerosene oil is objected to. The ointment of the seeds, or of the oil extracted from the seeds by ether, has been long in use.—*North-western Lancet* (St Paul, Minnesota), January 1885.

XANTHOMA MULTIPLEX.—An interesting discussion took place at the meeting of the American Dermatological Association in connexion with a paper by Dr Hardaway on this subject. The patient was a man aged 44, who had suffered from the disease for twelve years. The skin on the right half of the body was bronzed, on the left yellow. He complained of intense pruritus, the liver was enlarged and nodular, and there was a trace of sugar in the urine. The bronzing of the skin preceded the development of the xanthoma (which exhibited the plane, tubercular, and tuberous varieties) by a number of years. The eruption was symmetrical, with the exception of the lesions on one side of the chest; the mucous membranes, certain internal organs, and some of the long bones were evidently involved in the disease, while the characteristic lesions were also present in the tendons and subcutaneous areolar tissue. The nervous system exerted some influence in causing the disease, as there was a zosteriform arrangement of the lesions on the sides of the trunk. Some of the growths were said by the patient to have undergone spontaneous involution. Dr Hardaway was of opinion that xanthoma was a diathetic affection, and its connexion with hepatic jaundice was entirely secondary,—the jaundice, in fact, resulting from a deposition of xanthomatous tubercles in the liver. Localities much in motion, as the skin over the joints or the eyelids, might be predisposed to this peculiar change. Dr Duhring said that a point of unusual interest in this case was the presence of intense itching, beginning not with the jaundice, but with the xanthoma. He had tried to trace a possible relationship between the tumours met with in xanthoma and those seen in urticaria pigmentosa. He believed that two varieties of disease had been described under the name of urticaria pigmentosa, viz., cases of true urticaria and cases partaking more of the nature of xanthoma, with intense itching and pigmentation, and the formation of distinct papules and tubercles. Dr Taylor, in speaking of the involution of the lesions, said that all present would agree that this never occurred on the face.—*Journal of Cutaneous and Venereal Diseases*, December 1884.

IMPETIGO CONTAGIOSA.—Dr Payne (*St Thomas's Hospital Reports*, vol. xiii.) and Dr Colcott Fox (*Medical Society's Transactions*, 1884) have contributed some valuable information as to this curious disease. Dr Payne notes that though the neighbouring lymphatic glands generally become enlarged, always when the disease is on the occiput, chin, or lower lip, they do so less obviously when the disease occurs in the nose, upper parts of the cheeks, or forehead. Skin affections of the latter parts appear to have little tendency to affect the glands, which may explain why rodent ulcer of these parts does not implicate the glands. He also draws attention to the frequent association with the skin eruption of purulent inflammations of the mucous membranes or of the orifices of the body. Thus conjunctivitis sometimes precedes the outbreak of the impetigo, at others follows or co-exists with it, and the same may be said with regard to otorrhœa and vaginitis. These are rarer complications, and the otorrhœa precedes while the vaginitis seems derived from the impetigo, the infecting material in both cases being conveyed by the finger. Stomatitis is also sometimes seen in association with it. An ulcer in the mouth corresponds to a pustule or excoriated patch on the skin. The origin of ulcerative stomatitis in children is at times difficult to explain. If dependent on or derived from impetigo, this may serve to throw light on it. Another interesting point is its frequent origin from some suppurating wound in slight injury to the skin. Most of the children in whom this happens are no doubt cachectic, but there must be some property in the pus to make it contagious. The nature of this special morbid agent which can set up unhealthy suppuration in superficial wounds is obscure. Some have supposed it was a fungus allied to that of ringworm. Dr Fox met with two cases in which the trichophyton fungus excited pus production in the scalp, and thence pustules containing the fungus arose about the face; but these are accidental. Dr Payne has more than once seen micrococci singly and in chains in the serous fluid of recent vesicles, but he has also seen chains of micrococci undistinguishable from these in form in vesicles of herpes iris. "The question might be raised whether this micrococcus differs from that of pyæmia, or again from that alleged to be the cause of gonorrhœa; but it is evident that the inflammations produced by the poison of impetigo, for instance, in the eye (an organ which all these diseases may affect), are much less severe than in the case of either of the others."

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman, Inverness.

A Communication on Laparotomy for Extra-Uterine Pregnancy (by Vassily Sutugin, St Petersburg, *Centbl. f. Gynakol.*, 1884, No. 34).—The writer reports the case of a woman, aged 20 years, who consulted him on account of a swelling in the abdomen. In January 1883 the menses ceased; in March she noticed a swelling on the right side of her abdomen; in May severe vomiting and pain over the tumour, which continued to grow, confined her to bed for a month; during this time fœtal movements were felt. In August she had a feverish attack, and stated that she felt as though the fœtus had suddenly moved upwards in her abdomen. From this time the sickness subsided, and no more fœtal movements were felt. The breasts diminished in size, and a mass described as like a piece of flesh was passed per vaginam. The pain and fever lasted for about a month, and confined the patient to bed. From October 1883 to 1st May 1884, the date of the operation, the patient remained healthy, and complained of nothing save the presence of the tumour. Ten days after the probable death of the fœtus, the menses reappeared and returned three times between then and May. The writer diagnosed that he had to do with a case of extrauterine pregnancy, with an eight months' child which had been dead five months, and from the absence of the uterine bruit he believed that the placental circulation was in abeyance. The operation was undertaken on 1st May, with antiseptic precautions. On opening the abdomen, the sac was found completely adherent to the parietes, but the adhesions were loose, and only slightly vascular. Similar adhesions existed to omentum, small intestine, mesentery, back wall of the pelvis, and back wall of the uterus. All these were easily freed by the hand, but left a considerable oozing surface. The pedicle of the sac was composed of the right broad ligament, between the Fallopian tube and the ovary. The sac was punctured, but nothing escaped through the tube. On withdrawing it, however, grumous material exuded. An attempt was made to close the opening by forceps, but the sac tore. As the ovary was cystic, the operator resolved to remove it with the sac, and he accordingly secured the broad ligament in eight chained ligatures. The whole mass was then removed. The vessels of the pedicle were separately secured, the whole dusted with iodoform, and returned into the pelvis. As there was a good deal of oozing from the torn adhesions, a drainage-tube was passed through Douglas's pouch, the one end secured outside the vagina, the other in the angle of the abdominal wound. The vagina was packed with glycerine and iodoform plugs. In four weeks the patient was able to leave hospital.

ON INTRA-PERITONEAL UTERINE HÆMATOCELE (Jousset, *Thèse de Paris*).—The work is founded on a consideration of 28 cases, and on the post-mortem examination of 22 of these, and the writer comes to the following conclusions:—1. Hæmatocele is not an affection *sui generis*, but is the resulting symptom of several affections. 2. A hæmatocele swelling is so characteristic that, provided the patient be seen early, a diagnosis can be made without puncture. 3. One class of hæmatoceles arises as a result of extrauterine pregnancy, or, apart from pregnancy, from rupture of vessels. Here the condition follows either vague symptoms of pregnancy, or may arise during perfect health by the occurrence of sudden and characteristic signs of internal hæmorrhage, to which in a few days the complex symptoms of hæmatocele are added. Cases arising thus are comparatively few, and in them the prognosis is excessively grave. 4. Another class of cases where the prognosis is less grave are to be explained by reflex of blood from the uterus. Such show themselves either rapidly after metrorrhagia (metrorrhagic hæmatocele), or slowly after dysmenorrhœic symptoms (hæmatocele by menstrual retention). 5. The most frequent cause is pelvic peritonitis, when, from rupture of the vessels in the adhesions, hæmatocele is slowly occasioned. This form is the least dangerous. 6. One dare only treat surgically when the symptoms indicate danger to life.

ON THE USE OF HOT-WATER INJECTIONS IN POST-PARTUM HÆMORRHAGE (by Carl Regnault, Stuttgart, *Centbl. f. Gynakol.*, 1884, No. 40).—The writer details his experience as a reply to the papers which have lately appeared on the above subject, some of which have been already noticed in the periscope. He tabulates 108 cases, in 80 of which the injection was used for hæmorrhage, and in 28 principally for antiseptic reasons. When used for hæmorrhage he strongly advises that at the same time ergot should be given and vigorous friction over the uterus employed, while after the injection an ice bag should be laid on the abdomen. He replies at length to the objections which have been brought forward to the use of hot water, and shows that they do not apply to his cases, in all of which the results were extremely satisfactory,—a fact which he attributes largely to the use of ergot, of friction, and of the ice bag.

LAPAROTOMY IN A CASE OF EXTRAUTERINE PREGNANCY (by Cattani, *Ibid.*, No. 42, abstract).—In this case, which was operated on by Porro at the termination of the ninth month, and while the patient was acutely ill and feverish, the sac, which was closely adherent to the abdominal wall, bladder, etc., was opened, and the fœtus removed. Vaginal drainage was employed, and the placenta left alone. Recovery was very slow. The sac was constantly washed out with antiseptic solutions, and the placenta came away piecemeal.

AGAINST THE TOO ENERGETIC USE OF CORROSIVE SUBLIMATE IN MIDWIFERY (by Winter, *Ibid.* No. 43).—The writer founds his paper on his experience in the University Wards of Berlin. He holds that vaginal irrigation is only necessary during or after a confinement where prolonged labour threatens, or has caused alterations of the secretions. The principles which he lays down for safe antiseptic sublimate treatment of a healthy woman about to be confined in a maternity hospital are,—that she should have a hot bath, that the external genitals should be washed with soap and sublimate solution, and that vaginal injection should only be used when the case has come from suspicious hands. When intra-uterine injections are necessary, he advises that they should not be used stronger than 1 to 3000 or 1 to 5000, from the use of which he shows that results as regards disinfection are obtained quite equal to those when stronger solutions have been used, while the danger of poisoning is reduced to a minimum.

EXTRAUTERINE PREGNANCY IN A TUBO-OVARIAN CYST.—Dr Vulliet, of Geneva, describes in the *Archiv für Gynäkologie* (Band xxii. Heft 3) a case which he believes to have been of the above kind. There was the history, common in such cases, of previous pelvic inflammation: of the symptoms of pregnancy, milk in the breast, etc., and the discharge from the vagina of a decidual membrane. There was a tumour behind the uterus, pushing that organ forwards. An incision was made into the tumour per vaginam, but the wall found so thick (in consequence, as was afterwards found, of the implantation of the placenta in the lower part of the cyst) that nothing could be done by this method, and laparotomy was therefore performed, the fœtus removed, and drainage tubes inserted both into the abdominal and vaginal wounds. The fluid contained in the sac was scanty, grayish, and fœtid. The patient died on the day after the operation from septic peritonitis. On autopsy the uterus was found enlarged. The left tube and ovary were found adherent to the parietal peritoneum, and a small abscess between the tube and the ligament of the ovary. The gestation cyst was bounded in front by the right broad ligament and the uterus, behind by the rectum and the pelvic wall. The right tube was adherent to the sac, tortuous, and when opened was found dilated, thickened, and opening into the gestation sac. No trace of the right ovary could be found, and the most careful examination of the walls of the cyst failed to discover any ovarian structure in them. Nevertheless, from the fact that the ovary could not be found, and that the tube opened into the cyst, Dr Vulliet endorses the view of Professor Zahn (by whom the cyst was examined) that it was originally a tubo-ovarian cyst,—the ovarian tissue being, as is usual in such cysts, spread out over the wall of the cyst, but probably not recognisable in consequence of the secondary changes due to the pregnancy, death of fœtus, inflammation of cyst, etc. Dr Vulliet has found, recorded by Cazeaux, an indubitable instance of pregnancy in a tubo-ovarian cyst. He points out, and shows from cases, that three forms of tubo-ovarian cysts are met with:—(1.) Small and of recent formation, with the ovary unaltered; (2.) Those in which the ovary is wholly or for the most part converted into a membrane, but retains its proper histological structure; (3.) Those in which, from tension or other changes, the ovigenous tissue is destroyed.

HYSTERECTOMY FOR UTERINE EPITHELIOMA.—Dr A. Caponotto has recently published (*Annali d' Ostetricia*, October 1884) the

results of twenty-one cases of total hysterectomy, which were under the care of Prof. Novaro, of Turin. Of the twenty-one operations, twenty were performed by the vaginal method. Six of the patients died shortly after the operation, the autopsies showing an extensive invasion by the cancer,—so great, indeed, that had the state of things been known, the operation would not have been performed. Of the eleven remaining cases, there were three complete and four incomplete operations, and four fatal cases, the incomplete having relapsed. We have, then, fourteen cases in which life was shortened by the operation, and three in which it was prolonged.—*Bull. Gén. de Thérap.*, November 30, 1884.

Double Uterus and Vagina.—Dr Dirner, of Buda Pesth, relates in the *Archiv für Gynäkologie* (Band xxii. Heft 3) a remarkable case of the above kind. The patient consulted a medical man because coitus was followed by involuntary escape of urine. He found that intercourse had taken place per urethram, and discovered and dilated a vaginal orifice. Connexion henceforth took place through this canal, and pregnancy followed, which ended in abortion. After this she came under Dr Dirner's observation at Professor Tauffer's clinic. It was found that vagina and uterus were double. Intercourse had taken place through the *left* vagina, and pregnancy in the *left* uterus. The right vagina was narrow and its orifice very small, the right uterus smaller than the left. Professor Tauffer treated the case by removal of the vaginal septum, as well as of a small urethral growth which was causing trouble. After this the patient became again pregnant, this time in the *right* uterus, and was delivered at term. It was noted that during labour the left uterus contracted at the same time as the right, and that after involution the right uterus was larger than the left.

The Diagnosis of Pelvic Inflammation by the Temperature of the Urine.—Betz ("Memorabilien") states that the temperature of the bladder, and hence that of the urine contained in it, is affected by that of the surrounding tissues. Therefore, in inflammatory conditions of the pelvic cellular tissue and peritoneum, the patient often complains that her urine feels "hot." If cystitis can be excluded, it is quite probable, he believes, that this symptom points to some inflammation in the neighbourhood of the bladder.

OCCASIONAL PERISCOPE OF THE DISEASES OF CHILDREN.

By Charles E. Underhill, M.B., F.R.C.P.E., Physician to the Royal Hospital for Sick Children.

The Treatment of Pleurisy, with Special Reference to the Choice of Operation.—If the effusion be a purulent one, it cannot be cured without an operation. The pus may be removed by puncture, but the methods which act on the principle of the siphon are preferable to aspiration. A permanent cure is, however, never obtained, even by repeated punctures. The operation of making an opening in an intercostal space is easily performed, but it has this disadvantage, that the space between the ribs becomes greatly contracted very shortly after the operation, and the drainage-tube is soon so compressed that it does not act freely, and requires an elastic catheter to be passed through it every now and again to let out the pus. The only thoroughly satisfactory operation is the sub-periosteal resection of a sufficiently large piece (from 1 to 2 centimetres at least) of a rib. In this way the pleural cavity can be drained to the last drop. The operation is best performed on the eighth or ninth rib in the posterior axillary line. Antiseptics are essential. A perfect cure frequently follows in four or five weeks. Serous and sero-fibrinous effusions, as a rule, demand only an expectant treatment. They are usually absorbed.—Prof. Pott, Halle, *Jahrbuch f. Kinderheilk.*, B. xxii. Heft 3.

Another paper on this subject by Dr Biedert is found in the same volume. He has seen a few cases in which a purulent effusion has been cured by a single aspiration, but the great majority of cases require a more radical treatment. After mentioning and disposing of the method of operating by means of a trochar and long siphon tube opening under water, he advocates the usual operation, with or without resection, of part of a rib—antiseptics, exclusive of the spray, essential. The pleura should never be washed out. With this method he has been very successful.

APOPLEXIA NEONATORUM.—A brief history is given of ten cases observed in various hospitals in New York. Seven of the cases occurred after labours in which the vertex presented, the remaining three were breech cases. The labours, as a rule, had been easy, and in only one of the vertex cases had the forceps been used. These two classes of cases were contrasted in various ways: thus, paralysis occurred in the three breech, but in none of the vertex cases; there were either localized convulsions (two cases), or none at all in the breech cases; there were general convulsions (two cases), or none at all in the vertex cases. The localization of the clots was markedly different in the two classes. In the seven vertex cases the effusion was mainly at the base of the brain and in the cerebellum, or at most covering only the occipital lobes, while in the breech cases the effusion was upon some portion of the convexity of the brain; in none of them was the cerebellum or the base of the brain compressed by the effused blood. Again, the length of time which the infant survived is of interest. One only of the vertex cases reached the fifth day; the other six all died within three days; while the breech cases lived twenty-seven hours, eight days, and twenty-two days respectively. The author believes that "the assumption of a variety of apoplexy of the new-born in which the effusion is limited to the convexity, and which is characterized by paralysis, and from which its victims do not so rapidly die, has never been previously made."—Sarah J. M'Nutt, M.D., New York, *Am. Jour. of Obstet.*, January 1885.

REPORT OF A CASE OF ENCEPHALOCELE—SUCCESSFUL LIGATION.—After discussing the various modes of treating these cases, the author advises that they should be left alone, unless they are growing rapidly, in which case ligature is the safest means to use. The case reported was as follows:—A coloured child was first seen when seven weeks old, when a tumour, three-quarters of an inch in diameter, was found situated over the anterior fontanelle, "the mass was not smooth, but regularly grooved, it pulsated, and had the characteristics of brain tissue." This was the twelfth child, and was born after a prolonged labour. The tumour was left to nature, and increased very slowly until the middle of the fourth month, when in two days it increased with great rapidity, and when seen at this time was as large as an orange, with a pedicle three-quarters of an inch in diameter. Within these two days it is said to have increased to five times its previous size. This growth was accompanied by constant crying and sickness; it bled freely when touched. A ligature was put round it, when the sickness and bleeding at once ceased. The ligation was repeated twice afterwards at intervals of a fortnight, and six weeks after the first application the tumour dropped off. The stump quickly healed, and a year later the child was in good health.—John H. Duncan, M.D., *Am. Jour. of Obstet.*

ALCOHOLISM IN CHILDHOOD AND YOUTH.—Among the most painful cases which come before the physician to a hospital for children are those which are caused by alcohol. The tendency, in the majority of cases of juvenile alcoholism, appears to be inherited, and is most marked in those children whose mothers are confirmed inebriates; and it is to be feared that the craving for stimulants among women in general is traceable to the treatment adopted in some of the disorders which come before us in gynæcological practice. Especially is this true of the too general habit of ordering stimulants for the relief of dysmenorrhœa. So destructive and disastrous to both physical and moral health is this habit in childhood, that the author is strongly of opinion that "under no circumstances should stimulants be given to children except when required therapeutically, and then only in the form and definite doses of other medicines." Among several cases which came under treatment in hospital is a well-described case of delirium tremens in a boy aged eight years. His mother was an habitual drunkard, and was frequently intoxicated during the pregnancy—the father being a sober man and a good workman. The symptoms were much the same as in the adult—

pallor, emaciation, cold and clammy skin, tremors, nervous terror, very rapid and feeble pulse, loss of appetite, eyes glistening and staring, with dilated pupils. Under treatment the symptoms disappeared, and in three months he was convalescent, and subsequently removed to a reformatory school.—T. More Madden, M.D., *Am. Jour. of Obstet.*

A CASE OF PROGRESSIVE PERNICIOUS ANÆMIA IN A CHILD AGED TEN YEARS.—This case is reported on account of its rarity. The blood was not examined, but the symptoms and course of the disease and the P.M. appearances seem to confirm the accuracy of the diagnosis. Laura V., aged 10, whose family history could not be obtained, was first seen July 8th, 1884. Had been ill six weeks. Symptoms—extreme pallor of skin and mucous membranes, dyspnœa, muscular weakness, occasional vomiting and diarrhœa, palpitation, swelling of the feet, soreness over the sternum, and hæmorrhage from the mouth. No enlargement of liver, spleen, or lymphatic glands; body well nourished; pulse very weak, but regular in volume and rhythm. Lungs normal, urine normal, a soft systolic murmur over the heart, and a loud venous hum in the neck. For the first few days the child seemed to improve, gaining three pounds in weight in six days; after this the prostration rapidly increased, the heart's action failed, vomiting occurred occasionally, and the child died on July 19th. The temperature was slightly above the normal throughout, and rose during the last three days as high as 102°. Post-mortem examination showed extreme anæmia of the internal organs, blood fluid, some serous fluid in both pleuræ, with marked fatty degeneration of the heart and kidneys, especially the former. There was no enlargement of liver, spleen, or mesenteric glands, and no affection of Peyer's patches. References are given to three more cases of this rare disease in childhood.—H. C. Haven, M.D., *Arch. of Pediatrics*, Dec. 1884.

A CASE OF CONGENITAL GOITRE CURED BY A SINGLE APPLICATION OF MERCURIC BINIODIDE.—A child four months old, healthy and well nourished, had a goitre in the right side of the throat large enough to fill up the whole space between the chin and sternum on that side. The treatment adopted was that used with success in India, as stated by Aitken: of an ointment of biniodide of mercury, 10 grains to the ounce, a piece the size of a filbert was rubbed well into the skin over the whole tumour, and the child was exposed to the sun for half an hour and before a fire for an hour. This was done twice in one day. A good deal of pain was caused, but the tumour diminished very rapidly, and in eleven days was entirely gone.—J. C. Worthington, *New York Medical Record.*

Part Fifth.

MEDICAL NEWS.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine at the sitting held on 7th March 1885, and were duly admitted L.R.C.P. Ed.:—Joseph Agnew Moon, Dungannon; Charles Thomason Dornford, Wantage, Berks.; Asher Gross, Leeds; Robert Evans, Pwllheli, N. Wales.

Extractum Pancreatis.—We have carefully examined specimens of *Extractum Pancreatis* prepared by Burroughs, Wellcome, & Co.,—according to the process of Dr Fairchild, and have much pleasure in recommending it to the profession. It is a preparation from the pancreatic gland, in the form of a dry powder, pleasant to take, and contains all the digestive ferments of the pancreas. We have also received specimens of this *Extractum Pancreatis* put up in tubes with bicarbonate of soda, each tube containing five grains of the extract and fifteen grains of the bicarbonate of soda, which quantity is sufficient for peptonizing one pint of milk. It is difficult to over-estimate the importance of peptonizing agents, and there is none more important than the one now under consideration. We, accordingly, have much pleasure in highly recommending this preparation of Burroughs, Wellcome, & Co., especially these tubes containing the extract and soda, and hope they will be used by the profession as widely as they deserve.

M'Dougall's "Fluid Carbolate."—This is a new preparation by M'Dougall, whose name has so long been associated with the preparation of carbolic acid, and is a solution containing carbolic and sulphurous acids in neutral combination of the strength of one per cent. of each of these acids. It is a preparation which we strongly recommend, and feel sure that it is one which will be extensively used.

CORRESPONDENCE.

Yarrow, Selkirk, *7th March* 1885.

To the Editor of the Edinburgh Medical Journal.

Sir,—Having seen a report of the discussion on Professor Stewart's paper in the *Edinburgh Medical Journal*, I fear I failed in the remarks I made to make myself quite understood by your reporter. There is only one point, however, on which I should like to be allowed to make an explanation. From the report one would infer that I used the hypodermic needle in exploring for fluid in a way which I considered rash. Now, what I said was that the way in which I used it might by some be considered rash, which is a very different thing.

There are some practitioners even now who may continue treating an effusion into the pleura as a consolidated lung, or even as an enlarged liver, merely because of their dread of the exploring needle. Holding it, however, as an ethical principle, that the practitioner who, through timidity, withholds his hand, and so allows his patient to die, or become a chronic invalid, is more culpable than he who, even at some risk, performs an operation which may not only prevent the ruin of his patient's health, but save his life, I cannot understand why the innocent exploratory puncture is not more generally resorted to.—I am, yours truly,

JOHN HADDON.

OBITUARY.

WILLIAM ALEXANDER FRANCIS BROWNE, L.R.C.S.E., LL.D., ETC.

AT Dumfries, on the 2nd March, in the seventy-ninth year of his age, there passed away, after a short illness, a memorable man, William A. F. Browne. Dr Browne, when only a year old, lost his father, a lieutenant in the Cameronian Regiment, who was drowned in the wreck of a transport ship bringing troops to reinforce the British army during the Peninsular war. He was brought up in his grandfather's house in Stirling, and educated at the High School there. Studying medicine at Edinburgh, he became Licentiate of the Royal College of Surgeons in 1826. Soon after he travelled on the Continent, when he visited the asylums of Paris, and made acquaintance with Esquirol and other physicians eminent in the treatment of the insane. At Edinburgh he formed a close friendship with Mr George Combe and his brother Dr Andrew Combe, and was one of the contributors to the *Phrenological Journal*. The doctrines of Gall have been since superseded by the accumulation of new data derived from a prolonged study of the functions of the brain; but fifty years ago many men of deserved reputation in the scientific world were more or less favourable to phrenology. Among these may be mentioned Andral, Broussais, Bouillaud, Comte, Ferrus, Vimont, Voisin, and in our own country, Elliotson and Macnish. In his later years Dr Browne assured me that he had given up all belief in the distribution of the mental faculties over the outer surface of the hemispheres as indicated by the charts and busts of Gall and Spurzheim. It was while he was practising in his native town of Stirling that he was, in 1834, elected by a majority Medical Superintendent of the Royal Asylum at Montrose. There he forthwith proceeded to carry out those reforms which were so much needed, and which his previous study enabled him to lead in a proper direction. During the four years he was at Montrose he got a new infirmary erected separate from the asylum, and published a small book, *Asylums as they are, were, and should be.*

When the Crichton Institution at Dumfries was founded upon a bequest left by Dr Crichton of Friars' Carse, Dr Browne became, in 1839, the first superintendent. Built in a fine situation on an eminence looking down upon the Nith, it was intended for the benefit of the upper and middle classes, and the reputation of this institution for the treatment of the insane soon became diffused. With the help of the profits derived from boarders from all parts of the kingdom, another asylum was erected within the grounds for the poorer classes of the southern counties. So in Dumfries and Galloway, at least, the inhabitants had all the advantages of an hospital for the insane conducted upon principles upon which any further improvement was apt to pass into formal exaggeration. Having often visited the two asylums while under the charge of Dr Browne, I can bear witness that the Crichton Institution, thirty years ago, had everything really needed for the full treatment of the insane. A visit with Dr Browne was not only full of instruction, then very difficult to gain, but displayed the wonderful power and versatility of his mind, his kindness of heart, his quick sense of the humour and pathos of life, his good taste, his great knowledge and readiness of resource, and his attention to all useful details. In 1857 he became first Commissioner in Lunacy for Scotland, when for thirteen years he worked at the establishment of new asylums and the introduction of better methods of treating insanity throughout Scotland. Though decided in his views on matters of real importance, Dr Browne was tolerant of honest difference of opinion, and had none of the narrowness of the doctrinaire.

In 1870, while in full working vigour and usefulness, he became affected by glaucoma, from which relief was vainly tried by operation. The strength of his character and the activity of his mind enabled him to bear up against the cruel misfortune of total blindness. He retired to Crindau, a country house on the banks of the Nith, near Dumfries. As psychological consultant he made himself very useful to Dr Gilchrist, who had succeeded him at the Crichton Institution. Though now somewhat advanced in life, Dr Browne tried to educate his other senses to make up for the loss of sight; and with the aid of the ladies of his family he occupied himself in study and writing. The products of his wonderful literary activity were given to the world, sometimes in his own name, sometimes anonymously, in various scientific and literary journals. For the most part they recorded the result of his experience and reflections on psychology and insanity. Naturally, as the visible world became dimmer to his memory, his writings became more and more speculative, biographical, and literary.

These were the circumstances and limitations of his life. Such conditions might have been filled with what is called "acceptance" by men of different powers and character, as the metal poured into the mould may produce a vase of pewter, of silver, or of gold. From a richly gifted nature, Dr Browne gave to the world work of the best material and the finest form. To those who knew him it was evident that he was fitted to bear a leading part in almost any of those pursuits where men seek wealth, power, and distinction. His conversational powers were so brilliant that they were sure to bring him at once into notice wherever he came. Full of wit and humour, he possessed much natural politeness, and a handsome and dignified appearance. What completed the charm of his social qualities was that he had a ready sympathy for others, liked a friend who tried to meet him in argument, and enjoyed another man's good sayings as much as his own were appreciated by others. His benevolence extended to all ranks of men, but his friends knew the full warmth of his nature. No man would take more trouble to help one whom he judged worthy to be helped. An old friend who had fallen into misfortune was sure of his delicate and kindly sympathy.

His two surviving sons, Dr James Crichton Browne, Lord Chancellor's Visitor for Lunatics, and Mr Balfour Browne, a leading parliamentary barrister, have inherited in a wonderful degree his brilliant literary qualities. He has left two daughters, who were incessant in their efforts to aid and support their father during his fourteen years blindness. Dr Browne had the affliction to lose his amiable and devoted wife about three years ago. She was a sister of the late John Hutton Balfour, Professor of Botany, and of Dr Thomas Balfour of Edinburgh, and Dr A. Balfour of Portobello.

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Part First.

ORIGINAL COMMUNICATIONS.

I.—ON HYSTERECTOMY.

By THOMAS KEITH, M.D., LL.D.

TEN years ago, when I published in the *Lancet* my first cases of supra-vaginal hysterectomy, I expressed a hope that sufferers from uterine fibroids would in time get as much benefit from surgery as those with ovarian tumours had already received. No one could then have thought that this change would come as quickly as it has done. At that time there was little encouragement to advise operation, even in the very extreme cases. Most of the hysterectomies were performed by mistake for ovarian tumours, and the results were almost uniformly disastrous. Thus Sir Spencer Wells had at that time done thirteen operations, with a fatal result in ten of them, and as several had died within a few hours after operation from hæmorrhage, the natural conclusion was that hysterectomy was not a legitimate operation for a disease that, as a rule, rarely shortened life. Little wonder, then, that the routine advice given to patients was to wait for the menopause.

The improvement, however, that has come of late years is not in the direction that was looked for—an improvement in the technical methods of operating—but in a new operation altogether, the removal of the ovaries and tubes, to bring about the cessation of menstruation, which generally ends the active life of uterine fibroids. It is an operation full of promise, and, speaking for my own work, the result is more satisfactory every time that it is performed. The low mortality that accompanies it, a mortality that ought not to be greater than that of the removal of simple non-adherent ovarian tumours, will render interference by this means warrantable in a larger number of cases, and at an earlier stage. It will not, however, supersede hysterectomy altogether, for there are unfortunately some cases in which, even when got at, the ovaries cannot be separated from the uterine tumour without too great a risk. At present the position of the operation seems to be this,—that when interference is justifiable, the simpler method of removal of the ovaries is the one to be tried in the first instance, in all cases where the tumour is small and does not extend much above the umbilicus, or in all tumours under nine or ten pounds. In big tumours, this method is of doubtful efficacy, either as to its power of arresting menstruation or retarding growth, while the distance of the ovaries from the middle line renders the proceeding a more dangerous and uncertain one.

The proportion of cases of uterine fibroid in which interference of any kind is at any time warrantable is extremely small. It is not perhaps greater than five per cent. of all cases. I have no hesitation in saying, from what I know, that operations for fibroids are far too often performed, considering the fatal nature of the operation. At present there is a speculation abroad for abdominal section, and a woman with a movable tumour in her abdomen has, in these days, a small chance of escaping the said section. As the operation stands at present, its mortality is perhaps greater than that of any other surgical operation. It ought not to be undertaken without some strong necessity, for not one fibrous tumour in twenty gives the woman any trouble, or scarcely any, during the whole menstrual life, and a death directly from one is extremely rare.

The cases in which I think hysterectomy may be reasonably recommended are these:—

1. In very large rapidly growing tumours of all kinds in young women. By a large tumour, I mean one that completely fills the abdomen.

2. In all cases of real fibrous cystic tumours, if they can be removed. Also in cases of suppurating cystic tumours.

3. In most cases of œdematous fibrous tumour which are not cured by removal of the ovaries. These tumours grow to an enormous size, sometimes far larger than any ovarian tumours. I have seen them as large as 200 lbs. Sometimes quantities of red serum can be removed with much relief, and I have several times been able by this means to carry patients over the menopause, when the necessity for further puncturing ceases.

4. In cases of large bleeding fibroids, where removal of the ovaries cannot be accomplished, provided that the patient is not approaching the menopause. In these cases, as a rule, though there are many exceptions, menstruation goes on much beyond fifty. I have never seen it go beyond sixty, though very frequently it is continued till fifty-four or fifty-eight years are reached.

5. In certain cases of tumours surrounded by much free fluid, the result of peritonitis, provided that the fluid shows a tendency to re-accumulate after two or three punctures. My experience is, that after two or three punctures the fluid does not collect, and it often disappears without interference. The simple serous exudation from œdematous fibroids is most capricious. When present to a great extent the tumour will diminish, and when the fluid does disappear, its absence may, from some change in the osmosis, be followed by an extremely rapid growth of the tumour. It must

not be forgotten that long continued irritation of the peritoneal surfaces by large solid tumours is apt to be followed by degeneration of the peritoneum, of a sarcomatous or cancerous nature. The microscopic examination of the fluid will in such cases keep one from falling into error. While large healthy uterine fibroids were present, I have several times removed fluids swarming with cancerous elements, the source of which was found to be altogether in other organs affected with cancerous disease.

These embrace every form of case in which I have yet ventured to interfere by operation, and in the following histories an account is given of some of my more recent operations, that may be of use in showing the different ways of treating the attachments of uterine fibroids or illustrating some other point of interest. I may add, that all the fatal cases are already published.

CASE V.—*Fibrous Cystic Tumour of Uterus mistaken for an Ovarian Tumour; Supra-Vaginal Hysterectomy; Recovery.*—A married woman, 33 years of age, was brought to me by Dr Hunter of Linlithgow in April 1878. She was a thin, healthy woman. The tumour was distinctly cystic, and of rather rapid growth. Part of it came into the pelvis behind the uterus; movement of the tumour influenced the pelvic portion of the tumour very easily, but the cervix, which was rather pushed against the pubes, was unaffected. A single almost momentary examination was made, and the opinion given was that there was no doubt that the tumour was ovarian. Its removal was recommended. Operation was on the 17th of April. On exposing the tumour, in this case under the carbolic spray, the colour was noticed to be very dark, and on introducing the trocar, which required much force to pierce the tumour, nothing but a little blood escaped. The wound was enlarged to ten inches, and the whole was pushed out. Both ovaries were cystic; the left was elongated, enlarged, and flattened on the tumour, and could not have been removed; the right was also enlarged and full of cysts. Double wire ligatures were applied as low as possible, and all but the vaginal portion of the cervix was removed.

There were no unfavourable symptoms. Morphia was required to relieve pain, and the bladder was irritable for some days after operation. The highest temperature was thirty hours after, when the thermometer marked 103°. It did not fall below 102° till the end of third day. The highest pulse reached was 110, also about the time of the highest temperature. The slough did not separate till twenty-four days after, and she went home quite well six weeks after operation. She has had good health ever since.

The tumour weighed eleven pounds. A little care in the examination would have led to the discovery of its real nature, for one ovary was easily felt in the epigastrium, a little to the left of the umbilicus. The largest cyst contained thirty ounces of pure serum, which coagulated almost instantaneously on being exposed to the air. Care was taken to puncture the cyst so that there could be no admixture of blood. The section of division was nine by thirteen inches, and it was possible to include both broad ligaments in the wire with the ovaries, without detaching them from the tumour.

CASE XXXVI.—*Fibrous Cystic Tumour of Uterus, entirely Sub-Peritoneal; Recovery after Operation.*—A married lady, aged 32, having got a diversity of opinions in Glasgow as to the nature of an abdominal swelling which had been noticed since her marriage, went to London to consult the authorities there. There all seemed to have agreed that the tumour was ovarian. She might have an operation when she could not walk a mile, though, at the time, she could not walk a hundred yards without discomfort! She returned home much discouraged, for she felt that, whatever the nature of the tumour was, no one there cared to have anything to do with her. She then drifted here, as many a bad case has drifted before.

She was fat, and seemed to be in fair health. Some time ago, shortly after her marriage, she had several severe inflammatory attacks with great pelvic pain, confining her to bed for weeks at a time. The abdomen was distended by a soft fluctuatory tumour. Careful examination discovered the fundus of the uterus in the left loin above the crest of the ilium. The uterus was tender, slightly movable, and of normal size. Internally the finger entered a narrow tubular vagina directed to the left and pushed forwards by the abdominal tumour, which extended down close to the anus. The posterior wall of the vagina was much stretched, and felt very hard. The uterus could not be reached; indeed, the finger tip must have been 8 or 10 inches from it. The local difficulties in the pelvis were evidently very great. At first, the impression was that the tumour must be one of those not uncommon ovarian cysts, where the right broad ligament was opened up, and the uterus pushed to the opposite side; but here the fundus of the uterus was felt so distinctly, and was so very differently placed in every way from anything that I had ever seen, and so apparently separable from the cystic tumour, that I felt doubtful. I ventured, however, to say, that whatever it was, it was certainly not an ovarian tumour. After a few days, I removed 100 ounces of pure blood serum from the cyst. This did not nearly empty it, and the fluid came away—not in a full stream, but in a spasmodic sort of way—just as I have seen it do in cases of fibrous cysts when these were punctured. The interior structure of the uterine fibrous cysts quite explains the way in which the fluid behaves. But for the small and movable fundus, which, however, did not in the slightest degree change its position downwards, I would have said at once that the tumour was a uterine fibrous cyst. Now, I hesitated between that and some irregular form of retro-peritoneal tumours, such as I have already removed.

In the meantime, as some relief was obtained, delay was advised. In six weeks she was back again, having scarcely been out of her room. The swelling was much larger; the dulness now reached to near the ensiform cartilage, and the abdomen was generally fuller and broader looking all over. Tension in the pelvis on the vagina and rectum was, if possible, greater than before. The fundus now touched the left false ribs. All along, menstruation was regular and normal.

Operation was on 22nd Oct. last. A free incision was made from the umbilicus downwards. The cavity was opened at the umbilicus, as the position of the bladder was known to be high up in the abdomen. On putting in the hand, it was arrested by the bladder in front, and the same all round on both sides. The uterus was in the left lumbar region touching the ribs; the fundus, strangely free, was sticking out of the tumour like a potato. A puncture was made at the umbilicus, but the sac would not empty. Its upper part was now seized and pulled forwards, and as it was dragged out, the right healthy ovary and tube were seen to be stretched on it. The position of the ovary before the tapping must have been near the middle line, and about half-way between the umbilicus and ensiform cartilage. It was now seen that the whole of the tumour was sub-peritoneal, and that the floor of the pelvis was pushed up by the tumour almost to the level of the sternum. The tapping puncture was now enlarged, and the hand introduced into a fibrous cellular structure, with masses of fibroid here and there. The septa were broken up, and as much fluid pressed out as was possible. The thickness of the soft parts covering the cyst was remarkable. The edges of the cyst were then seized, and the long and tedious process of enucleation was begun. The solid part extended to the very floor of the pelvis on both sides, and its connexions everywhere were most close and firm,—entirely different from the loose cellular structure that exists in cases of ovarian cyst when the broad ligaments are opened up. Here all my strength was required to break down the intimate connexion that existed. It was impossible, after the first few inches of separation, to bring any bleeding part into view. At last, after it had given way in several places, the whole was turned out of the pelvis, and then its connexion to the right side of the uterus came into view—all being now separated but this. The point of departure of the fibrous cyst was immediately above the cervix on the right side, and under the peritoneum of the broad ligament. There was no pedicle,—only a broad, thick connexion. The cautery clamp was put on, but the structure being hard and dense, the crushing action of the blades made the tissues fissure at the point of junction, and it was removed. Any bleeding points were tied by fine silk. There was now the huge gap left to be dealt with. Sponges were stuffed in, and pressure was made. The right ovary and tube, as well as a large part of the very voluminous capsule, were cut away. The edges were secured by numerous ligatures, and then fixed in the wound. Some iodoform was put into the sac, a large long glass drainage-tube put in, and the wound closed.

The operation lasted one hour and twenty minutes. She was put to bed cold and collapsed, with blood pouring out at the tube. Two hours after, she was warm; pulse barely perceptible. Four ounces of pure blood were removed by suction from the pelvis, and there was, besides, the soaked sponges. At 5, and again at 9 P.M., several ounces more were got away through the tube. Pulse very feeble, but distinct, 120; temp. 99°·4; some sickness.

Second day.—Night quiet with morphia; pulse 125. By mid-day pulse had risen to 138; in the afternoon to 148; by evening it was 158; temp. 101°·9. She was flushed, and but for morphia would have been restless.

Third day.—Fair night; face dusky; tongue very dry; much flatus coming up; very feeble; pulse 160; only half an ounce of black serous fluid from tube. The day was got over somehow, by the aid of morphia and much whisky. By evening she was very restless, much flatus coming up. The pulse had fallen to 140, and was stronger; temp. 101°·6.

Fourth day.—The period has come on, giving much relief. Flatus has also passed downwards; only half an ounce of dark serum from the tube. The pulse has fallen to 116; temp. 101°·5.

Tenth day.—The uterus is now felt low in the vagina in its normal position. Tube still remains; discharge now slight.

Convalescence was slow but uninterrupted, and she went home fifty days after operation. One of the interesting points in this case is, that a large fibrous cystic tumour of the uterus, presenting great local difficulties, was removed, and that it was possible to save the body of the uterus with the healthy ovary of the left side.

In most cases of fibro-cystic tumours of the uterus a correct diagnosis is seldom an easy matter, and with every care it is sometimes difficult to distinguish them from the common ovarian cystic tumour without a preliminary puncture. Even then, after examination of the fluid, the evidence we have to go by is of a purely negative kind. This negative evidence, however, allows us to distinguish them from ovarian tumours, but there is no positive structure in a fibro-cystic fluid to guide us with certainty. The late Dr Atlee of Philadelphia was the first to point out, nearly twenty years ago, the rapid and spontaneous coagulability of certain of these fluids, unmixed with blood, when withdrawn from uterine fibrous cysts. I have frequently got help from this in forming a diagnosis, but it is not altogether a reliable symptom, and it happens only in a small proportion of cases. In these, the fluid is a simple blood serum, and jellies as quickly as blood does when withdrawn from the body. These fluids are probably always a blood serum in the first place, and become modified by time, by the action of inflammatory attacks, and other circumstances. In appearance they vary exceedingly; sometimes to the naked eye exactly like the linseed tea ovarian fluids; and every expert with whom I am acquainted has, at one time or another, pronounced this sort of fluid to be ovarian. They are most commonly, however, a red serum—from a pale red to a colour as dark as porter, presenting no structure whatever; or they may be of a dirty, pale, milky-like serum; and I have seen in an old uterine cyst much cholesterine. This cyst I punctured twice—the last time about ten years ago. It did not refill. The patient still carries about her tumour, but suffers no inconvenience from it. None of these old fluids coagulate on exposure to air; sometimes the clear serum-like fluid does not, and the serum that pours from an œdematous fibroid after operation certainly does not. I have removed clear serum from a cyst in the mesentery which coagulated immediately without any admixture of blood; and in two cases of retro-peritoneal cystic tumour, the fluid was simply a blood serum that jellied on exposure.

The most valuable information on the different ways of distinguishing between ovarian, ascitic, and other fluids is given by Dr Méhu of the Charité Hospital, Paris. These papers seem to have received little attention in this country.

CASE XXXVII.—*Solid Fibrous Tumour; Extensive Adhesions to Wall, Stomach, and Diaphragm; Supra-Vaginal Hysterectomy; Recovery.*—An unmarried woman, aged 34, from Musselburgh, was admitted into the Royal Infirmary in October 1884. Patient first noticed an abdominal tumour upwards of five years ago. She had then attacks of retention of urine. The tumour has steadily increased. For years past she has taken all sorts of drugs without the slightest result, except to increase her dyspepsia. For some time past she has been losing flesh, and is now extremely thin. The hands and feet are cold and blue; almost every kind of food disagrees with her, and she can only take anything in the smallest quantities.

She is naturally a thin, spare woman. The abdomen is completely occupied by a fibrous tumour, extending under the sternum, and pushing both liver and heart upwards. The heart sounds are extremely feeble, especially the first, which is almost absent. She once had acute rheumatism in her youth. There is a curious contraction of the tumour in front a little above the umbilicus; and at first sight the upper part of the tumour looks like an enlarged liver, for which many who saw her mistook it. There is another lump in the right loin, which can be pushed forwards a little from behind. At first this felt like an enlarged kidney, but careful examination showed the whole to be one tumour. There could not possibly be a clearer case for operation than this. The life was useless, and she was slowly being starved from inability to take enough of food.

Operation was on 6th November last. The incision at first extended five inches above the umbilicus to two inches above the pubes. When exposed, the tumour was deeply congested and very vascular looking. On introducing the hand, the tumour was found to extend very high up. It was in contact with the liver, pushing both it and the diaphragm upwards, and there were extensive adhesions above everywhere. The slightest touch of the fingers on the diaphragm in making this examination caused respiration invariably to stop at once. It was impossible to get out the tumour in the ordinary way. The incision was then enlarged as far up as it would go. This exposed adherent omentum and some long broad adhesions coming from above, as well as some parietal adhesion. The tumour seemed to be fixed too high up under the sternum to be brought out in any way. It was then pulled up out of the pelvis, and by placing several pairs of enormous looking forceps round the ligaments and base, the tumour was got out first from below, then by introducing two hands on either side, the upper portion was suddenly dislodged, and it appeared, with the whole of the stomach attached to its upper and back part. The omentum containing enormous vessels was spread over the upper third of the tumour all round, as well as much adherent mesentery and intestine. None of us had the slightest idea of the size of this mass. At least one-third of the whole tumour was concealed under the ribs. All these adhesions were dealt with as quickly as possible, a very large number of ligatures being left in. The part of the tumour, which felt like an enlarged kidney before operation, was entirely covered by adherent ascending colon, and was shelled out of its cellular attachments. This adhesion gave the most trouble. The most bleeding, however, came from above, partly from the vascular wall, and partly from long bands hanging down from the diaphragm under the sternum. The wound was closed by thirty-six deep sutures, besides a number of superficial ones. The incision above the umbilicus was larger than that below it. Operation lasted one hour and five minutes. A drainage tube was left in above the clamp. The tumour weighed only sixteen pounds. The upper part was broader than the lower.

The face was much congested on being put to bed. On wakening from the ether two hours after, she complained of pain and a feeling of great weight on the sternum. Several opiates were required to relieve this.

For many days there was difficulty of breathing, and much distress from the feeling of load on the chest. The congested appearance of the face slowly passed away. The head of the bed was well raised so as to allow fluids to gravitate into the pelvis and get away by the tube, which was left in for ten days. There was a troublesome suppuration in the upper part of the wound, and great hardness. After a time many silk ligatures suppurated out. But the recovery was perfect, and when she left the hospital she looked like a new woman.

CASE VI.—*Soft Bleeding Fibroid; Intra-Peritoneal Treatment; Recovery.*—In 1876 Dr Kidd of Alyth sent me an unmarried woman, a domestic servant, with a fibrous tumour low down in the pelvis and extending to the umbilicus. She was no longer able for her situation, partly from pain, and partly from excess at the menstrual periods. She was 29 years of age, and of a fairly healthy appearance. I advised her to delay interference unless such became absolutely necessary. After three years, she came again, very anxious for relief. She was much changed. The tumour now filled the abdomen, and she was extremely bloodless, quite unable to make her living in any way. The tumour varied much in size, very large and tense before menstruation, much smaller and softer after this was over. The loss of blood was sometimes very great.

Operation was on the 16th July 1879. An incision not exceeding ten inches was made. By taking time, the tumour moulded and could be pushed through the opening. Both broad ligaments extended up to the fundus of the tumour, on a level with the ribs, wrapping it all round. The portion containing the right ovarian vessels was first transfixed and ligatured in several detachments, a row of long locking forceps being arranged next the tumour. The same process was repeated on the other side. The tumour was then separated all round from its cellular attachments, and the separation was continued deep into the pelvis. The peritoneum in front was cut across, and the bladder separated downwards. A soft iron wire was secured low down by Koeberle's instrument, almost round the top of the vagina. There was not much bleeding, but a huge cavity was left, from which the pelvic portion of the tumour was shelled out. The serre-noeud, 5½ inches long, was left dipping into the pelvis, little more than the ring being seen outside. By no way could this have been fixed in the wound. The wound was kept as open as possible round the instrument, and the escape of discharges was facilitated by drainage.

The operation lasted one hour and a quarter. There was a good deal of pain, and several opiates were required during the afternoon. There were drenching perspirations for some days. The highest pulse reached was 124, about thirty hours after; the highest temperature was 100°·5. Recovery was uninterrupted. In ten days the *serre-noeud* came away with the slough, and she returned home thirty-two days after operation, the wound being then quite cicatrized.

The tumour was a soft œdematous fibroid, and weighed nineteen pounds. She has enjoyed perfect health since the operation.

CASE XI.—*Soft Bleeding Fibroid; Whole Uterus Removed; Recovery.*—A widow lady, 31 years of age, was first sent to me in 1879 by Dr Greig of Dundee. She had a small uterine fibroid, and the monthly periods were then beginning to be excessive. I saw her once or twice after that. Every time there was marked loss of health and greater anæmia. At last she felt that she was on the point of becoming a confirmed invalid. Every menstrual period left her less able to bear the loss of the next, and the hæmorrhages were getting more and more profuse. She had three children to attend to, and now she was almost unable to look after them in any way. I had never advised operation, hoping that it would not be necessary, as she was able to take good care of herself. It was now evident that she was one of those who would probably be unable to struggle on till menstruation passed away, and, for the first time, I felt justified in placing before her the risks and advantages of operation.

The tumour had steadily increased and now filled the abdomen. The ovaries were felt high up above the level of the umbilicus. There was no cervix, but the os could be dragged up almost beyond the reach of the finger by pushing above the pubes. The patient was extremely anæmic, with feeble pulse. She had her operation on the 25th March 1882. The incision was fourteen inches. The tumour was pushed out; both ovaries were enlarged and were high up on the tumour; the broad and round ligaments were thus raised; both were divided on either side. The tumour was then separated from its cellular attachments all the way round down to the top of the vagina. A soft iron wire was applied low down and twisted; then by a long, flat, narrow clamp the whole was fixed outside and the tumour cut away. The cavity of the tumour was very large, extending quite to the fundus. The membrane lining the interior was granular and very red; here and there were polypoid masses.

Save for her feebleness and irritability of the heart, recovery was almost uninterrupted. The highest pulse was 112, and that only once; the highest temperature 100°. The wound healed without discharging a drop of matter. The wires and clamp were not disturbed till the twenty-fourth day, when they were found loose. The slough was like a piece of dry tangle. The opening left was very small—less than in an ordinary clamp ovarian case. There was, for a few days, a small opening into the vagina; not a trace of uterus was left. She went home thirty-eight days after operation, and has kept strong and well ever since.

I need hardly say, that the treatment, for such a case as this, would now have been the removal of the ovaries when she first came to me, three years before this operation.

CASE XIII.—*Soft Bleeding Fibroid; Whole Uterus Removed; Recovery.*—Mrs E., aged 38, was recommended to me by the late Dr Baird of Perth. He had known her for long, and had such a poor opinion of her strength that he did not think she could bear any operation. When first seen she was so blanched that her face could hardly be seen on the pillow. I think that I never saw such extreme bloodlessness. The lips and tongue had literally no colour. The menstruation was excessive, lasting half the month, and the attacks of syncope were so alarming, that several times her friends thought that she was dead. The pulse was about 140; the heart had suffered from old rheumatic attacks, and its action was extremely feeble. Any interference was then out of the question in such a state of emaciation and feebleness. To all these things were added many sorrows, besides the depressing influence of exhausted means.

After some weeks spent in the country, almost entirely in the open air, she was brought back to town, not much improved. She now willingly agreed to my proposal that the tumour should be removed. A more unfavourable looking case could hardly be imagined. The anæmia was excessive; the heart's action rapid, irregular, and feeble; she was sleepless and excitable. The tumour was large, scarcely movable, and the condition in the pelvis doubtful. There was little cervix, and immediately behind it was a hard fixed swelling, the size of a large egg. In the left side of the pelvis was another similar swelling, but larger and less defined. This was supposed to be one of the ovaries. There was a constant, soaking serous discharge from the uterus.

The time selected for the operation was the day before menstruation was expected. By that time she had gained a little strength from the drenching hæmorrhage of the previous period. The incision was large, and was extended above the umbilicus for three or four inches. The tumour came out without any appearance of the ovaries. These were both adherent in the pelvis and enlarged to the size of an orange, the one felt behind the cervix was fixed to the vaginal wall. These were ligatured along with the enlarged and dilated tubes, and the stumps left inside. The tumour was so bloodless that when it was first exposed it looked like an ovarian tumour, and when the section was made, scarcely any blood escaped. The cavity was very large. The division was just at the vaginal junction. Its weight was nearly twenty pounds.

Convalescence was slow. The highest temperature was on the evening of the operation day—100°·5. The pulse was rapid, uncertain, and irregular. The greatest complaint arose from breathlessness and a feeling of want of air. There were frequent attacks of nervousness. The wound was not even looked at for ten days. She left her lodgings forty days after operation for the seaside. She soon got into excellent health, and in a short time it was impossible to recognise in the fresh, healthy, young-looking woman the subject of all the anxious doubts and fears of some months before.

CASE XXIII.—*Soft Bleeding Fibroid; Extensive Enucleation; Hysterectomy; Recovery.*—M. S., aged 40, a lady's maid, had suffered from profuse menstruation, and, about thirteen years ago, was aware that she had a fibrous tumour. I had seen her at intervals for many years. She has slowly lost ground, and has become feeble and anæmic. The period comes on every fourteen days, and continues for a week, and as soon as she has recovered from one illness another comes on. For some time she has held her situation on sufferance, but now feels that she is at the end of her strength and can go on no longer. The tumour extends to two inches above the umbilicus. It is well jammed down into the pelvis. The cervix is small, flat, and far back. The tumour is not adherent, but it is well fixed by the broad ligaments, both of which are opened up throughout.

Operation was on the 15th of October 1883. It was intended to remove the ovaries, but, though they could be felt, they could not be got at so as to ligature them. The incision was enlarged, and the tumour, with some difficulty, was turned out. The bladder came high up to near the umbilicus, and both ligaments spread out and enveloped the tumour. Each was separated by a ligature in several pieces, the peritoneal covering behind was divided, the bladder separated down, and the enucleation carried low into the pelvis till the top of the vagina was reached. A piece of peritoneum on the fundus, the size of the palm of the hand, was all that was left on the tumour. There was now much loose separated peritoneum to be disposed of. Some of this was brought up and included in the wire ligatures round the neck of the tumour, the rest of it was left lying loose. This operation was troublesome from the difficulty in finding some bleeding points in the loose cellular tissue.

Except that there was an unusual amount of pain the first afternoon, arising probably from the extreme tension necessary to secure the stump in the wound, recovery was uninterrupted. The highest temperature reached was 100°·8; the highest pulse 86. She left the Infirmary forty days after operation. She is now quite well and fit for all her duties. The case shows how little extreme anæmia *per se* affects the result of an operation.

CASE XXX.—*Solid Fibroid, Growing since Menstruation Ceased; Entire Uterus Removed; Recovery.*—A domestic servant, aged 58, was sent to the Infirmary by Dr Dewar of Kirriemuir, on account of an abdominal tumour of rapid growth. She was a tall, thin, hard, remarkably healthy woman. She had worked well all her life, and never had an ache or pain till seven or eight months before her admission, when some uneasiness called her attention to a small swelling in the abdomen. The pain was not great enough to prevent her working as usual. The small tumour was carefully watched. It increased slowly but steadily; for the last two months its increase was rapid, and for the last six months there was a red discharge from the vagina. This was never in excess, but it was constant. Menstruation had ceased at 50. It had always been natural, never profuse, even when the periods were passing away.

Up to the level of the ribs the abdomen is filled by a hard prominent tumour. There is no feeling of fluid, and little of elasticity. The abdominal wall is thin, and free over the tumour. The cervix is small, and the slightest movement of the tumour affects it.

The swelling was clearly uterine, but the history of such a hard tumour developing entirely since the cessation of the menses was so unusual, that the case was gone into with more than ordinary care. From all inquiries made, there was no doubt that the history given was correct. The patient was a remarkably intelligent woman, and very circumstantial in her narrative.

Thinking that the tumour might be a sarcoma, an aspirator needle was put into it at the only elastic spot there was. It brought away nothing, not even blood.

The tongue was red, with deep hacks all over it. It had always been so, she said. The heart's impulse was a little strong, perhaps, but the sounds were healthy; the radial artery felt a little enlarged and hard. The urine was normal, in moderate quantity—sp. gr. 1020.

Operation on 23rd May. She took ether remarkably well. A free incision was made, and the tumour was pushed out. Both ovaries were atrophied, and one consisted simply of a small sac. The broad attachment was drawn together by a ligature, and a clamp applied quite round the top of the vagina. The whole uterus was completely removed. The wound was closed by thirty deep sutures. The operation lasted thirty-eight minutes, and was extremely simple. The weight of the tumour was fifteen pounds. The uterine cavity was large; length between the cornua 12½ inches; length of sides, 10 and 6½ inches.

There were no unfavourable symptoms. Recovery was uninterrupted. The wound healed without discharging a drop of matter, and the patient left the hospital thirty-four days after operation. She came back several times to show herself in the course of the next three weeks. Then she went to Dundee, to see some friends, before returning home.

Now comes the remarkable feature of this case. Soon after her arrival in Dundee she was seized with acute pain in the right haunch; this was followed by œdema of both limbs. She could not extend the thigh at the hip-joint, and pressure on the right iliac brim gave rise to screaming. The temperature was normal. Things continued in this state for a fortnight—the woman taking her food moderately well, and, with the exception of the local pain, made no special complaint. On the 25th of August she suddenly became comatose, and remained so till death, forty-eight hours after.

She was attended by Dr M'Ewan and Dr Stalker of Dundee, who naturally concluded that the pain in the hip had something to do with the operation so recently performed. Knowing that I would be interested in the patient, Dr Stalker kindly communicated the above history of the case to me, and the following is an extract from his letter, of what was found at the post-mortem examination:—"The pelvis was quite normal; a linear cicatrix at the top of the vagina alone represented the uterus. There was no adhesion of the intestine in the pelvis. The kidneys were congested and cirrhotic, with all the usual marks—adherent capsules, gritty sensation on cutting with the knife, and deposits of whitish salts in the glomeruli. The heart was slightly hypertrophied. The œdema of the lower extremities was slight, and extended up to the middle of the legs. We had no means of taking off the small quantity of urine which was in the bladder, and, during life, the urine was not examined."

That this condition of the kidney existed at the time of the operation there can be little doubt, though not a trace of anything faulty was noticed in the examination of the urine, either then or at any time during the convalescence. In fact, I never saw a more perfect subject for a severe operation. Her life had been that of a simple living countrywoman,—always working, but never overworked. This is the only instance that I have met with where I was able to satisfy myself that the growth of a uterine fibroid commenced after menstruation ceased, or at least, where, if present at that time, it must have been of small size.

CASE XXXI.—*Large Soft Fibroid; Adhesions, much Enucleation; Right Broad Ligament opened up; Supra-Vaginal Hysterectomy; Recovery.*—A single lady, aged 29, was sent to me by Dr Parker of Halifax, Nova Scotia, on account of a large soft uterine fibroid, which touched the ribs on either side. Menstruation was profuse, and the increase in the tumour was decided. Dr Parker had not examined her for a year before, and at that time his impression was that the tumour barely reached the umbilicus. She was pale and soft, troubled with boils. The family history was good. The friends who accompanied her were not very anxious for interference, but I felt warranted in advising operation, knowing well the sort of life that is before any woman of twenty-nine, with an œdematous fibrous tumour already filling the abdomen.

Careful examination showed that the right broad ligament was opened up through its whole extent. The cervix was to the left, almost beyond reach of the finger. The tumour occupied the upper pelvis, especially a lump the size of the fist, that came down behind the pubes. There was a little movement of this part when the tumour above was much pulled upon; but whether this portion was under the peritoneum or not, frequent examinations failed to make certain.

Operation was on the 10th July last. The incision was from 4 inches above the umbilicus downwards to within 2 inches of the pubes. This was sufficient, for the soft fibroids mould themselves, and with a little pushing and patience can often be got through a moderate-sized wound. The right broad ligament was expanded over the whole of the right half of the tumour. There was much enucleation. The portion behind the pubes was also shelled out, and a ligature placed round the base to constrict somewhat the neck before applying a large clamp to keep it in position. The tumour weighed upwards of nineteen pounds.

Convalescence was slow, though the wound healed entirely by first intention; the first dressing was on the ninth day. The highest temperature was 105°, on the seventh day; the highest pulse 140. Temperature remained high for the first fortnight without any apparent cause. I have heard from her lately since her return to Halifax. She is quite well.

CASE XXXII.—*Solid Fibroid Tumour; Omental and Intestinal Adhesions; Broad Ligament opened up; much Enucleation; Recovery.*—A single lady, 30 years of age, was sent to me by Dr Somerville of Galashiels in 1880, with a uterine fibroid extending to a little above the umbilicus. Beyond the inconvenience that arose from its size, little or no discomfort had as yet arisen. The menstrual periods were regular and in excess, but not to such an extent as to weaken her.

She was seen about once a year, and four years after I first saw her, the tumour had much enlarged. It had broadened out and extended into the right loin. She was getting thin about the chest and arms, and the inconveniences arising from the growth were telling upon her general health. After due consideration, she came into town to have the tumour removed.

This was done on the 14th July last. Owing to the solidity and breadth of the tumour, a very free incision was necessary in order to get it turned out. The right side of the tumour extended into the lumbar region, opening up the broad ligament very largely. The posterior adhesions were extensive, and omentum, intestine, mesentery, and ascending colon were all detached. Most of the vessels in these attachments were tied by catgut as the separation went on. This was continued quite low down. The left ovary was embraced in the clamp, and after a long operation the wound was closed in the usual way.

There was not a single bad symptom. Pulse and temperature were scarcely ever affected during the whole convalescence. The wound was not looked at till the eleventh day, when it was found healed throughout.

II.—INAUGURAL ADDRESS DELIVERED AT THE OPENING OF THE 148TH SESSION (1884–5) OF THE ROYAL MEDICAL SOCIETY, 7TH NOVEMBER 1884.

By THOMAS R. FRASER, M.D., F.R.SS. L. & E., F.R.C.P.E., Professor of Materia Medica and of Clinical Medicine, and Dean of the Faculty of Medicine, in the University of Edinburgh.

MR PRESIDENT AND GENTLEMEN,—I consider it a high honour and privilege to have the opportunity of addressing the Royal Medical Society to-night, and of introducing the work of the 148th session of its existence. Since 1868, when the custom of inviting others than acting Presidents of the Society to deliver inaugural addresses was first introduced, the task has been entrusted to several of my former teachers and to several of my contemporaries, whose merits and position well entitled them to be selected. I gladly follow them, although I can claim no other title in my favour than a hearty interest in the welfare of the Society, and a conviction, at least as great as that of any of my predecessors, that the Society has conferred, and is destined to continue to confer, great benefits upon the medical students of Edinburgh.

As I am now addressing many who have not become initiated in the work and objects of the Society, I may be allowed to state that it was founded, in 1737, by students of medicine, "for the purpose of discussing subjects of professional interest." From small beginnings the Society quickly increased in importance. In 1775, it acquired a building in the old Surgeons' Square, and in 1852, it removed to its present home in which we are to-night assembled. During this long period, the Society has fulfilled a valuable function in the professional and social education of its members, and through them it has exerted a most beneficial influence upon the students and teachers of medicine in Edinburgh. The weekly dissertations and discussions have supplemented the teaching of the University and Extra-Academical Lecturers, by concentrating attention on subjects of scientific and practical importance, and by stimulating thought and originality. Business habits have been acquired by the care given to the private affairs of the Society, which have always been managed by the members themselves; and study has been encouraged, culture has been fostered, and valuable and lasting friendships have been originated by the excellent opportunities afforded in the reading-rooms and library, and in the daily intercourse of the members.

It is sufficient to glance over the roll-book of the Society to learn how those advantages have been appreciated in times past. Among the names of many of the foremost representatives of medical science and practice we find those of Andrew Duncan, Marshall Hall, Richard Bright, William Cullen, Charles Hastings, Robert Christison, William Gregory, James Simpson, Martin Barry, John Reid,

William Carpenter, John Goodsir, Warburton Begbie, William Sanders, Charles Murchison, and Hughes Bennett. I refrain from mentioning the names of members still actively engaged in maintaining the reputation they first acquired in the Royal Medical Society; but I am tempted to recall the *personnel* of the Society in my own time, when my contemporaries included Alexander Dickson, John Anderson, Joseph Bell, Crichton Brown, Crum-Brown, Pettigrew, John Duncan, Gamgee, Rutherford, Duckworth, and Annandale.

By not a few of these former members a just and well-merited tribute to the life-long benefits which the Society had conferred upon them has been placed on record. In his interesting autobiography, Dr Charles Williams, the author of the *Principles of Medicine*, states:—"The library of the Royal Medical Society supplied me with books, and also with apparatus for carrying on investigations. I joined the Society in my second year, and found it of great utility, not only for the use of its valuable and extensive library, but also in its debates, which were carried on every week during the session, giving its members opportunity for public speaking and discussion. I soon took an active part in these meetings, and became intimate with many of its members."[1] Dr George Wilson, in his life of John Reid, characterizes the Society as being "unquestionably the most distinguished among the student societies of Great Britain devoted to the prosecution of science;" and after detailing its history and objects, he proceeds to state—"It may seem to unprofessional readers a needless matter to make so lengthened a reference to a single society. But those who know how great is the interest taken by the majority of the intelligent students of medicine in Edinburgh in the Royal Medical Society will not wonder at the special notice of it taken here. It is as truly an educational institution as the University or the medical schools."[2] And in describing Dr Marshall Hall's connexion with the Society, his biographer observes,—"This institution is said to have exerted an influence on the medical students of Edinburgh, and on their career through life, second only to that of the University itself."[3]

The truth of this last observation has recently been impressed upon me when looking over a list of the titles of the dissertations read by former members. The influence of the Society in confirming and establishing early tastes cannot, I think, be more clearly shown than by observing the subjects brought before the Society by members who have afterwards most honourably identified themselves with special departments of medical science and practice. Selecting only a few of these, I find that the dissertation of Sir

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[1] *Memoirs of Life and Work.* By Charles J. B. Williams, M.D., F.R.S., 1884, p. 15.

[2] *Life of Dr John Reid.* By George Wilson, M.D. 1852, pp. 48 and 50.

[3] *Memoirs of Marshall Hall, M.D., F.R.S., &c.* By his Widow. 1861, p. 13.

James Simpson was on Diseases of the Placenta; of Dr Murchison, on the Spleen; of Dr Sanders, on Causes of the Motion of the Heart, and also on Asiatic Cholera; of Dr Hughes Bennett, on the Light thrown by Pathology, and by Experiments on the Lower Animals, on the functions of the Brain; of Dr Gamgee, on Spectrum Analysis; of Dr Rutherford, on Cellular Pathology; of Dr Dickson, on the Seed-vessels of Phanerogamic Plants; of Dr Joseph Bell, on Epithelial Cancer; of Professor Crum-Brown, on Chemical Types; of Dr Annandale, on Diseases of Fingers; of Dr Chiene, on Diseases of the Mamma; of Dr Grainger Stewart, on Reflex Action; and of Dr Lauder Brunton, on Mercury.

Gentlemen, I have referred to my appreciation of the great privilege which has been granted to me of addressing you at this time. The time is one that is eminently significant in the history of medical education as well as of our University. The reform of medical education has at length reached a crisis in its history; and after the distractions produced by unsuccessful efforts on the part of the State to satisfy persistent and clamorous demands for change and innovation, it appears as if the immediate future of the profession is to be left in its own hands and under its own guidance. During the last twelve years, successive bills, introduced by the Government, have one after the other been withdrawn under the pressure of opposition from various of the Licensing Bodies and Medical Associations, and, I think it must be admitted, under the pressure, also, of political exigencies which have interfered with their proper discussion. The attempts to carry these bills may be allowed to imply the existence of a conviction that changes or improvements are required in some quarters. The evidences of the existence of this conviction are not so clearly to be discovered in Scotland as in England. In the latter country, the giving of qualifications to practise after incomplete examination, and probably, therefore, incomplete education, must be regarded as one of the most potent as well as one of the best founded incentives to the demand for legislation. In Scotland, however, this incentive has had no existence for many years. The Universities and Corporations of this country have, from a remote period, conferred their diplomas only after examinations which included medicine, surgery, and midwifery. As to the quality of these examinations, opinions might vary in regard to several of them; but a machinery, that of inspection, was long ago created, though it has hitherto been only imperfectly brought into operation, whereby a sufficiently high standard of examination could everywhere be insured. Instead of strengthening this machinery and compelling its efficient application, the attempt has been made to introduce radical and iconoclastic changes; and, therefore, it has been that the University of Edinburgh has not been able to accept all the provisions of the Government measures. In the last Bill, the provision to subject ur students to the hardship and pecuniary loss of passing, in addition to the final examination required by the University for its degrees, an examination conducted by an outside authority, and from its objects necessarily implying a lower standard than the University examination, could not be favourably regarded, nor, indeed, be accepted by us. I believe the full significance of this provision had not been understood by Government. When it was explained to them by our able representative in Parliament, its injurious tendencies were acknowledged in the most complete manner by the acceptance of the now well-known Playfair amendment. This amendment was also accepted by the other Scottish Universities, by the Universities of Ireland, and with the addition of a proviso, in which we concurred, by the Universities of England; and, I believe, also by the corporations of the United Kingdom. With this concession, the University of Edinburgh accepted the Bill as a solution of a disquieting subject, and so far as this University is concerned it might have become an Act of the last session of Parliament. I think it proper to make this statement, as the history of the Medical Bill of 1883 has been otherwise described.[1]

It is probable that politicians will in future hesitate before again introducing a measure of so sweeping and elaborate a character as the Bill of last session. Their hesitation may be confirmed by the opinion announced only last month by the President of the General Medical Council, who expressed himself as follows:—"I venture to hazard the statement that three short clauses" (the last Bill contained seventy-two clauses), "to which no serious person could object, would, if passed into law, shortly relieve the teachers and students of medicine in this country of almost all their present educational uncertainties. The *first*, directing the Council not to admit to the Medical Register, after a given date, any person who had not passed examinations, satisfactory to the Council, in medicine, surgery, and midwifery; the *second*, empowering the Crown to appoint, in such manner as it deemed expedient, one or more assessors to every Examining Board . . . . ; the *third*, making it clear that the Council can, under clauses 18, 19, and 20 of the Medical Act, inquire into the modes of teaching by the schools, as well as into those of examining by the licensing bodies." Sir Thomas Acland proceeds to express the opinion that these desirable propositions might be given effect to by the existing licensing bodies and schools themselves, thereby implying that further legislation would be unnecessary. If, however, this anticipation should not be confirmed, and a short Bill should be found necessary, I think that the University of Edinburgh would have good reason to urge the adoption of a *fourth* proposition, to the effect that it should receive a representative for itself in the General Medical Council. With its unrivalled position among the medical authorities in the kingdom, it at present possesses only half a representative, and at the present moment can exert an influence on medical education and licensing only through the channel of a member of the Council appointed by another Scottish university. This joint and utterly inadequate representation constitutes an anomaly to which attention must be drawn whenever medical legislation is again attempted. It is indefensible, in view of the fact that the Universities of Durham, Oxford, Cambridge, and London are each separately represented on the Council, a privilege which they enjoy along with each of the medical and surgical corporations of Great Britain and Ireland,—all of which, unlike the University of Edinburgh, take either no part, or almost no part, in the great work of medical education.

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[1] In the Report of the Medical Reform Committee of the British Medical Association, published in the *British Medical Journal* of 26th July 1884 (p. 191), the following remarkable sentence occurs,—"First, the herbalists and illegal practitioners have taken alarm, and are pressing forward petitions against the Bill; but chiefly the Scotch universities and corporations, together with the Irish corporations, are bestirring themselves to defeat it." It is sufficient to remark that, in so far as this sentence refers to the University of Edinburgh, it is altogether incorrect.

But, gentlemen, a Medical Bill, restricted to the propositions formulated by the President of the General Medical Council, can have very little influence upon the course of education or of examination in the University of Edinburgh. The mere fact that such propositions should be advanced as the embodiment of what is considered sufficient to obtain, in great measure, the confidence of the public, might justify us in entertaining the most unbounded self-satisfaction, were we not conscious that we have not yet obtained a position of perfection, and were we not desirous of adopting, as occasion permits, every means in our power for improvement.

It cannot be said of any institution that improvements and modifications are not required in it. A foreshadowing of changes in the University has been indicated by the introduction, for the second time, of a Government Universities' Bill. It is not a Bill, however, that was originally intended directly to influence the interests which we in common share. The occasion for its introduction is to be found in circumstances and requirements outside the Faculty of Medicine; but as it provides for a Commission with large functions of inquiry and regulation, it is impossible to predict to what extent and in what directions medical education may be affected by its proceedings. Such reforms as seem to me to be called for in the Faculty of Medicine are, indeed, of a nature which the existing powers of the University would be able to effect without further legislation. They are included in changes in the curriculum, in the regulation of examinations, and in an extension of teaching.

The nature of the *first* is exemplified by one of the most recent improvements effected in the examination for medical degrees, by which, at the first professional examination, candidates are now, in certain circumstances, permitted to appear for examination sooner after attendance on the classes where the subjects of examination are taught than they formerly were. The results of the first occasion in which this change has been satisfactorily tested have been of the most gratifying description. One of the examiners, Professor Crum Brown, is reported to have stated, that "by this new arrangement there was a more intelligent acquaintance with the subject exhibited among the candidates who had just passed that examination than was often the case among their predecessors; the reason being, that when the examination was too long delayed after the period of study, the subject was forgotten, or the candidate feared that he had partially forgotten the subject and had recourse to reading little books upon it. In that way memory was revived in some of the things connected with the subject; but a good deal came in a mechanical manner, and without a proper or intelligent understanding."

I should be very favourable to the extension of this principle to the second professional examination also; where I believe the education of the student would be benefited by a subdivision of the subjects,—the examination in anatomy and physiology being made in all cases to precede the examination in materia medica and pathology. By these two changes, the greater number of the subjects included in the first and second professional examinations could be overtaken earlier in the course of study than is at present possible, and more time could be given to the important subjects of the final examination.

An extension of the curriculum to five years does not appear to be called for. There are many men who are able satisfactorily to overtake the studies required of them in a four years' course; and it would be a hardship to oblige these men to extend their course beyond the time that they find to be necessary. Those who consider a four years' course to be insufficient may, at their own option, continue their studies for five years, or for as long a period as they find it necessary to do so. It is a vain delusion to suppose that either a four or a five years' curriculum is sufficient to complete the education of a medical practitioner. He cannot be produced, Minerva-like, mature and fully endowed, from the brains of even the most accomplished of teachers, after so short a gestation as either four or five years. During this time he undergoes an apprentice training with all the advantages of unrestricted attention, and he acquires so much knowledge as should enable him to continue his studies more efficiently than otherwise he would be able to do so. These studies, however, must be continued for many years longer; and the teachers who have had the responsibility of his preliminary training will have every reason to be gratified if, in the great school of experience and self-education, the search after knowledge should endure during the lifetime of the student.

In reference to the *regulation of examinations*, my suggestion is one that can be very briefly and simply stated. It should be an established principle that no questions are asked of candidates which cannot be answered from the instruction given in the prescribed curriculum course of the subject of examination.

My *third* suggestion is in reference to the extension of teaching in the University. This process is one which naturally takes place with the growth of knowledge, but there are obstacles to its sufficient extension which might be removed. The University has done something towards facilitating extension within the last few years by the foundation of lectureships in mental diseases and in ophthalmology. The duties which the Legislature requires from practitioners in carrying into effect the appointed means of providing for the care of the insane and in regulating their relations to the rest of the community, impose an obligation upon all medical educational bodies to impart instruction on the subject of mental disease. It therefore becomes a question whether this instruction, in a shape sufficient for these requirements, should not be obligatory on all students of medicine. Something more, however, seems called for in encouraging the special teaching of this and other important subjects; and I would venture to suggest that this might be done, and the advancement of the subjects at the same time fostered, by the introduction of a system of University certificates or diplomas for important specialities, to be granted, as in the case of the degrees in public health, only to holders of the ordinary degrees in medicine, and after special studies pursued subsequently to the acquirement of these degrees. A certificate or diploma in mental disease or in ophthalmology would undoubtedly prove a valuable acquisition to the graduate in medicine who proposes to specialize his practice in one or other of these departments.

Other departments, such as those of diseases of the skin and ear, of pharmacy, and of dentistry, might also be definitely recognised. In the case of the two latter, a degree in medicine or surgery, or attendance on the full curriculum for these degrees, would certainly be altogether uncalled for. The student of pharmacy would with advantage study all or several of the subjects of the first professional examination, and would then diverge into a special course arranged for his further studies. The student of dentistry would study the subjects of the first and second professional examinations, and, after passing the examinations, would apply himself to the special course best qualifying him for the practice of this specialty.

A university whose function it is to recognise and assist in developing all true advancement of knowledge may, by too long delayed recognition, impede the progress of knowledge, and unjustly withhold some of the great benefits it has the high function to confer.

With these few words and suggestions on the subjects of medical and of university reform, I pass now to consider what we must all regard as the most important event of the last session, the celebration of the third century of the existence of the University. The record of the gratifying events of that celebration, transcending the most sanguine anticipations, has already been compiled in a convenient form by the industry of a member of this Society; and in a few days a further and more detailed history will make its appearance. I suppose, however, that we have all ourselves taken an actual share in the celebrations; and events of so unexampled a kind impress themselves deeply upon the memory, and need no printed record to recall them. It is not my purpose to dwell on the circumstances of that celebration, but I cannot make even a passing reference to them without congratulating the Royal Medical Society on the great success of its contribution to the festivities. The entertainment given by this Society was worthy of its position in the history of the University, and worthy of a Society which can claim a foundation almost coeval with that of the Medical Faculty of the University. Its success was, I am sure, an ample reward for the care and attention which must have been bestowed on the arrangement of its details by the Presidents of the Society.

Prominent among the events of the tercentenary celebration was the inauguration of the New Buildings of the Faculty of Medicine. By a happy chance, the completion of those buildings coincided with this memorable event in the history of our University, and the opportunity was afforded of associating with the inauguration some of the most distinguished representatives of science and literature in the world. We may, I believe, congratulate ourselves that never before had a temple of Æsculapius been consecrated under more brilliant and auspicious circumstances. Upon us, teachers and students, to whom has been assigned the task and the privilege of making the best use of this magnificent gift, a grave responsibility is laid. We are called upon to continue the traditions of a school of medicine which, by the devotion and earnest labour of a long succession of teachers and students, has reached a position of unexampled prosperity. This task has been entrusted to us at a time when medical art and knowledge have entered a new era, as clearly to be distinguished from the era that has passed as the New Buildings are to be distinguished from those we have departed from.

In its origin, and for many succeeding centuries, medicine had of necessity but slight associations with science. Even when the collateral sciences, whose importance we now recognise, had made considerable progress, medicine was slow in appreciating the immense value of the assistance to be derived from them. After a long isolation, important departments of science have been absorbed, the process of absorption first occurring with botany, zoology, chemistry, and anatomy, then with physiology, and, much more recently, with the varieties of physiology which we recognise as pathology and as pharmacology. The result of this absorption has been entirely to change the aspect of medicine. The methods of study have been transformed, and a new era has been entered upon, whose characteristics will be retained for many years, and probably during the remainder of its existence.

This era is that of observation and experiment—the methods of all true science—of investigation of the sciences concerned with life, carried on independently of any immediate bearings upon the healing art. In the construction and arrangements of our New Buildings its distinguishing stamp has been amply recognised. In the older buildings the provision for medical education consisted of large lecture-rooms, having in a few instances incommodious laboratories attached to them. In the New Buildings, extensive ranges of large laboratories, affording abundant opportunities for work, have attached to them lecture-rooms which constitute appendages to the laboratories rather than the main features of the buildings.

These important changes have not been effected too soon. If we desire to take our share in the developments of medical science that are now proceeding, and to maintain the position of the Medical School of Edinburgh as a great centre of education, we must actively engage in the cultivation of the collateral sciences from which the art of medicine is now receiving so many valuable accessions. The past history of medicine emphatically teaches that the devotion of centuries to the mere observation of disease and the recording of the impressions of experience has led to but disappointing results, whereas the accessions that have been obtained from the cultivation of scientific methods have produced results which have entirely altered the aspect of medicine. As one of our most philosophical and widely informed writers, John Simon, has stated, "The progress which has been made from conditions of vagueness to conditions of exactitude has in many respects been greater in these twenty-five years than in the twenty-five centuries which preceded them; and with this increase of insight, due almost entirely to scientific experiment, the practical resources of our art, for present and future good to the world, have had, or will have, commensurate increase."[1]

Patriotism, and the desire to benefit mankind, which will, I trust, always continue to be incentives in this School, urge us to realize the altered circumstances that are now in operation, and to engage in those lines of research which are so emphatically indicated as the paths to progress. It should continue to be our ambition to lead and not to follow in the advancement of medicine. A great step has been gained by the acquisition of the New Buildings, and of the magnificent opportunities for practical observation afforded in the adjoining Infirmary. I see no reason why, in the course of time, these advantages should not result in placing Edinburgh in the position of a great School of research as well as of medical education. With fully equipped laboratories, with teachers conducting courses of instruction in all the important departments of systematic and practical medicine, a School might here be organised which would serve as a centre for the diffusion of medical knowledge to all English speaking people. I do not think it is an illegitimate ambition to aim at this result. We owe great debts to teachers of medicine in Germany. To the class-rooms and laboratories of that country a considerable number of the students and graduates of Great Britain and of the British Colonies resort, year after year, for the purpose of learning methods of scientific research, and even of supplementing their knowledge of the practical departments of medicine and surgery. They do so at much inconvenience and under many disadvantages. The mere difference of language is to many an obstacle, and months are spent in overcoming it, to the procrastination of the objects they have immediately in view. I do not think it is a narrow feeling of patriotism which urges us to endeavour to replace these inconveniencies by instituting in Edinburgh a great School—more successful in the attainment of the highest objects of medical science and art than the School which at present exists, and which, on its entry upon a new epoch, may owe much of its future development to its present teachers and students. To attain this object, it is almost unnecessary to remark that something more than class-rooms and commodious laboratories are required. I pass over the loyal and hearty co-operation of teachers and students, which, I have no doubt, would be freely given; I pass over changes and further developments in the course of instruction, to some of which I have already referred, for their discussion would require a more detailed consideration than I am able, on this occasion, to bestow upon them; and I pass over the great obstacle to scientific research in this country, which a sentimentalism, neither robust nor reasonable, has compelled the Legislature to impose upon biological science, as I have little doubt that, in the course of time, the rewakened intelligence of the country will cause this obstacle to be removed. In addition to these requisites, there remains one—the obtaining of sufficient pecuniary assistance—which I also think should not constitute a serious hindrance. The laboratories that have been so generously constructed require to be furnished and maintained, and this can only be done at considerable expense. The researches that may be undertaken would necessitate expenditure for apparatus and materials; and the workers—who, in most instances, would be students and the younger members of the profession—could not be expected, unless some provision were made for them, to spend their time and best energies in investigations, which, however certainly they may fructify hereafter into valuable applications, would, in all probability, yield no immediate pecuniary reward. It is in the highest degree encouraging to know that, within little more than twenty years, the University has received the magnificent sum of £232,000 for the foundation of bursaries and scholarships, a liberal share of which has been bestowed upon the students of the Faculty of Medicine. With some conspicuous exceptions, these foundations are not, however, applicable to purposes which I would venture to describe as the most important. They are generally applied to reward diligence in the ordinary studies of the students; to pay students, in other words, for doing that which they join the University to do, and which they should do to the best of their ability without the incentive of such rewards. I have long entertained the opinion that this application of money is not the best that might be made. When consideration is given to the incalculable services that would be rendered to humanity, as well as to our University, by the appropriation of these sums of money to the furtherance of original research, their too frequent application to purposes of comparatively little value is much to be regretted. A few thousand pounds devoted to the foundation, in each of the experimental departments of the medical curriculum, of research fellowships, and of endowments to supply the apparatus and materials, without which modern science can make little advance, would be productive of the greatest benefit. It is hopeless to look for assistance from the Government of this country, which, in its dealings with the Scottish Universities, refuses to follow the lead of Germany and of other enlightened nations, in fostering the developments and aims of the higher education. I trust, therefore, that future benefactors of the University, endowed, it may be, with the princely resources and generosity of a Vans Dunlop, may be induced to give us their assistance. Their gifts could not be bestowed for a more worthy object than the advancement of research in the medical sciences, where each discovery increases the utility of the healing art, and widens the sphere of the application of the charity which is inseparably linked with the practice of medicine.

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[1] Presidential Address delivered before the Section of State Medicine, International Medical Congress, 1881.

I cannot conclude this reference to the New Buildings, and to the suggestions for improvement which their inauguration and the celebration of the tercentenary of the University so strongly bring before us, without some allusion to the fact that, in the arrangements that have been made, and in others that are yet unfinished, a great advance has been effected in providing for the comfort and convenience of students. When we contrast the old class-rooms, characterized by their imperfect ventilation and lighting, and their generally meagre altitude and insufficient capacity, with the abundantly airy, well-lighted and spacious rooms for which they have been exchanged, we recognise one prominent evidence at least of this advance. I hope, however, that in the course of a few weeks it will be shown that in other respects consideration has been given to the wants and comforts of students. The work has been commenced of preparing for their use two rooms in the New Buildings, which will supply a want, from which, I fear, they have already too long suffered. One of these rooms is destined to serve as a students' "common room," where some opportunity for social intercourse will be afforded, and the other as a reading-room, in which a considerable library of medical books will be placed.

It has occasionally been advanced as a reproach against the majority of the Scottish universities that the social side of student-life is too much neglected by them. This reproach has had some foundation; but I do not think we are prepared to take extreme measures to remove it, especially if their tendency would be to destroy such a valuable feature of our system as the fostering of independence, or would entail the imposing of conditions which are not suited to the circumstances of a large proportion of our students. At the same time, it is gratifying to find that, among recent reforms, increasing consideration is being given to this very important element in university organization. The advantages of a closer intercourse among students must be almost incalculable in a university, affluent in the number of her students, who have been collected from the most distant parts of the world, and who are necessarily composed of individual elements and groups imbued with the greatest diversity of ideas and tastes. The institution of the Students' Club and the movement to found a Students' Union are entitled to every commendation, which may very appropriately be bestowed in the hall of this Society. For many years the Royal Medical Society has afforded to the students of medicine some of those advantages which it is hoped will be conferred by the Students' Union upon the general body of the students. In its magnificent library, in its museum, reading-rooms, and public hall, it constitutes an establishment unique in its advantages and conveniences among all the student institutions of the country. Perhaps the members would permit me to suggest that its attractions might be increased were they to introduce popular literature into the Society more largely than is now done. I make the suggestion to some extent from my own experience as a former member, and I think that if one of the rooms were set apart for newspapers and the best non-medical periodical literature, the attractions and usefulness of the Society would assuredly not be lessened.

In the direction of further improvements of a social description, it is worthy of consideration if the institution of a students' residence hall should not be contemplated. I would strongly deprecate, even if it were possible, the general introduction of a collegiate system into our University. The experience of the Royal Medical Society, however, has shown that, among the students of medicine, a certain number find in this Society conditions which favour their tastes and minister to their wants. Among the large number of students of the University it is not unreasonable to suppose that there are some to whom a residence college would be a great benefit. In my capacity as Dean of the Faculty of Medicine this want has, time after time, been impressed upon my attention by those who have the best of reasons to be interested in the welfare of students, and especially of colonial students. The great obstacle to the introduction of this reform is one which I am afraid I have already had occasion to indicate—the necessity which it implies for pecuniary assistance. It is essential for the success of the scheme that a large building should be erected, capable of accommodating about one hundred students, and that it should be endowed with means sufficient at least to secure a warder of good parts. It would be most important to avoid any lavish extraction of money from those who live in the college, such as occurs in residence colleges elsewhere. The expense to the students should, indeed, be restricted to a reasonable sum for board. As it may be anticipated that such an establishment would be mainly occupied by colonial students, who number upwards of 260 at the present time, and as we are told that in the colonies large sums of money are sometimes amassed, even by members of our profession, I would commend this scheme to the best consideration of colonial enterprise and benevolence!

I must now conclude the remarks that have been suggested to me by the specially memorable events of the time at which I have the privilege of addressing you. I offer no excuse for having brought these topics under the notice of this meeting. The experience of the past has shown that in this Society many of those who have exerted the most powerful influence upon medical progress and education have received a valuable portion of their training. The present circumstances of the Society encourage me to hope that this influence will be continued in the future. That the Royal Medical Society may always meet with success and prosperity must be the fervent wish of every one who has at heart the best interests of the Medical School of Edinburgh. I trust that in this new session, and in subsequent sessions, still larger numbers may join the Society than have hitherto done so; for then there would be conferred upon increasing numbers of students the high educational and social training which has in the past been so eminently effective in elevating the tone of our profession and in increasing the reputation of our University.

III.—PODALIC VERSION—ITS PLACE IN OBSTETRICS.

By S. Lawrence, M.D., L.R.C.S., Montrose, Corresponding Member of the Edinburgh Obstetrical Society.

(Read at the Quarterly Meeting of the Forfarshire Medical Association, held at Dundee, 29th January 1885.)

Every operative and manipulative procedure, whether surgical or obstetric, has its own special history, possessed of more or less interest; and it may not be inappropriate to take a cursory survey of the rise and progress of podalic version before submitting to your notice some portion of my own experience in regard to it. Such a retrospect, although necessarily brief and imperfect, may help to keep alive in our minds a grateful remembrance of names inseparably associated with invaluable service both to our profession and humanity.

To Ambrose Paré, who flourished during the 16th century, and to whom the art of surgery owes so much, especially for his introduction of the ligature for wounded arteries, is due the credit of having first recommended podalic version in cross births. His proposal was strenuously opposed by his contemporaries, and its adoption was by no means general till long subsequent to his death. One is naturally surprised that the force of prejudice, however strong, should have delayed the acceptance of what is so manifestly an important addition to the resources of the obstetric art. A very limited experience might have sufficed to show that in cross presentations podalic version was a very valuable procedure. Demonstrably, it was an expedient vastly superior to laborious and generally futile attempts to bring down the head (the only species of version known to the ancients), to lopping off a protruding arm, or to the haphazard practice of leaving the case to the too often ineffectual efforts of nature. Slowly but surely the advantages of turning the child in such cases became manifest; and this at first disparaged procedure ultimately commanded universal assent, and became the established mode of practice. It was Ambrose Paré, also, according to his pupil Guillemau, who first inculcated the practice of turning in all cases of dangerous floodings during labour—a practice which subsequently received the support and advocacy of another distinguished French accoucheur, namely, Mauriceau.

At what time in the history of midwifery version was employed in labours complicated with convulsions, and who had the merit of first showing its adaptation to such cases, I am unable to assert; but its performances in this grave obstetric emergency marked an important stage in its progress, and strengthened its claims to the confidence and gratitude of accoucheurs. Yet strange to say, at a period not more remote than 1814, we find Dr Merriman writing disparagingly of such a method of procedure.

A great advance took place in the progress and practical utility of podalic version when it was employed in cases of difficult labour from contracted pelvic brim, as a substitute for the long forceps and craniotomy. It is perhaps impossible to determine with certainty to whom the merit is due of having first extended its use to such cases, but it may be regarded as a well-established fact that Sir James Simpson was the first publicly to commend the practice, and to vindicate its claims to professional acceptance. At a meeting of the Edinburgh Obstetrical Society, held on the 20th January 1847, Dr Simpson narrated the case of a contracted pelvic brim in which, on the preceding day, he had performed version as a substitute for craniotomy, the mode of procedure which had been had recourse to in the previous confinement of the patient. He at the same time stated that in several similar cases he had adopted this practice, and he succinctly but clearly enumerated various important advantages it possessed. Then, in December of the same year, appeared in the *Provincial Medical and Surgical Journal*, the first of a series of papers from the same active and fertile brain, which extended over the successive monthly numbers of that periodical for the following year (1848), elaborately expounding the theory of the practice, enforcing its safety and efficacy, and replying to real and imaginary objections against it. Those papers marked a new and memorable departure in the history of version. In their grasp of principles, their fulness of details, their vigorous polemic, and their thorough and exhaustive discussion, they are entitled to rank among the most characteristic and interesting of Dr Simpson's numerous contributions to the science and art of obstetrics; and they may justly be regarded as the Magna Charta of podalic version. The impression they produced was wide-spread and influential; and it may be confidently affirmed that from the date of their appearance down to the present time not only have fewer fœtal crania been brought into contact with the remorseless crotchet, but that far fewer maternal lives have been sacrificed by difficult and protracted labours. A few years after, viz., in February 1852, Dr Simpson resumed discussion of the subject in the pages of the *Edinburgh Medical Journal*, adducing a larger experience in corroboration of the views and arguments he had formerly advanced. But while Professor Simpson was unquestionably not only the ablest, but the first public exponent and advocate of podalic version in contracted pelvic brim, there is another name specially deserving of honourable mention in connexion with this practice. And as a quondam and grateful pupil of the late Dr James Wilson, sen., of Glasgow, it gives me much pleasure to bring forward his claims. A concise, but most interesting paper, entitled "On the Advantages of Turning in Certain Cases of Narrow Pelvis," was read by Dr Wilson at a meeting of the Glasgow Medico-Chirurgical Society, on the 12th October 1847, and published in the *Edinburgh Medical Journal* of the following May. The opening sentence of that paper strikes the key-note of the whole question. "When the head," says Dr Wilson, "in certain cases of parturition is prevented from entering the brim of the pelvis from defective form, or insufficient space, are we to resort at once to embryotomy—the general practice—or may we not, with some prospect of saving the child, accomplish delivery by turning?" But I wish to fix attention specially on what immediately follows. "For upwards of thirty years (observe this was said in 1847) I have been in the habit in such cases of effecting delivery by turning, and I have good reason to believe that the lives of many children have been saved by this practice without the lives of the mothers having been in any degree endangered." From this statement I think we are warranted to con-

clude that Dr Wilson had been, if not the first, at least among the earliest accoucheurs to employ turning in place of craniotomy in cases of contracted pelvic brim; and that had he been endowed with a larger measure of self assertion, he might have laid claim to a leading position in relation to this practice, and have thrown the clear light of his experience around it, a full quarter of a century before the sun of the great Edinburgh Professor shone forth with meridian brightness, paling all lesser luminaries in his beams. In short, as regards the respective merits of these two eminent men in relation to podalic version in cases of contracted pelvis, the case stands thus:—In the adoption of the practice, whether or not he was its originator, Dr Wilson had precedence of Dr Simpson by a long series of years; in the public announcement and vindication of it Dr Simpson antedated Dr Wilson by nine months. With characteristic modesty and candour Dr Wilson, in a footnote to his paper, concedes Dr Simpson's claims. He says, "Whatever may be the value of the practice recommended, Dr Simpson has the merit of first giving it publicity." I mention only one more writer on this question—one who in his day had the ear of his brethren in matters obstetrical—the late Dr Alexander Milne of Edinburgh. In the March number of the *Edinburgh Medical Journal* for 1867, an important contribution, read before the Edinburgh Obstetrical Society in December 1866, appeared from his pen, emphasising all that had been advanced by Sir James Simpson in 1848 and 1852, and narrating additional facts well fitted to remove any lingering doubt or scepticism which might still be haunting the professional mind, and preventing the general adoption of a great practical improvement in the obstetric art. I take this opportunity to commend to the renewed attention and study of my professional brethren those several papers I have named. From the intrinsic importance of the subject of which they treat, and as marking the onward progress of medical thought and opinion, they may still be read and pondered with all the zest and interest with which they were received on their first appearance. And should attempts be at any time made to restore the forceps to the first place amongst our expedients in cases of contracted pelvis, I know no better counteractive to such a retrograde movement than a due consideration of the facts and arguments which those papers present.[1]

I desire now, with all deference, to bring into view the estimate I have been personally led to form of podalic version as based on my own practice. Not to travel over too wide a field, I shall restrict attention to the experience I have had of it during a consecutive series of 500 midwifery cases, extending over the last few years, and but recently terminated. Speaking generally, the result of my experience is not only to establish the conclusion pleaded for by Sir James Simpson and others, that it is invaluable as a method of procedure in cases of difficult labour from contracted brim; but also a most important expedient in cases of threatened tedious labour from inefficient uterine action. In other words, I have been in the habit of frequently employing podalic version, not only where there was difficult labour from the presence of mechanical obstruction, but *where there was the prospect of injuriously prolonged labour owing to the absence of adequate propulsive power.* Or to speak in the scholastic language of Dr Merriman, I have frequently performed turning in cases of *dystocia anenergica*, threatening to pass into *dystocia diutina.* I at once and candidly admit that I cannot plead the sanction of any recognised authority—of any great name—for such an employment of podalic version. But if the course I have pursued has been somewhat novel, I may be allowed to point in its vindication to its results, and to affirm that the end which was attained *seemed* at least to justify the means.

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[1] It may be alleged that the invention of Tarnier's axis-traction forceps changes the whole aspect of the question. I greatly doubt this. This instrument is ingenious, no doubt, and may be possessed of special advantages in certain cases. But until its advocates are more agreed among themselves as to its best mode of construction, and until the profession generally have had longer experience of its powers, it will be wise to abide by podalic version as the safest and most efficient procedure in the great majority of cases of labour with contracted pelvic brim.

In the 500 cases under review I had recourse to podalic version in all 43 times. The varied circumstances under which I employed it were—

1st.	For	mechanical obstruction from contracted brim, ...	22	times.
2nd.	„	Arm presentation, ...	2	„
3rd.	„	Puerperal convulsions, ...	1	„
4th.	„	Insufficient uterine action threatening tedious labour, ...	18	„
			43	„

Omitting, as not pertinent to this discussion, the cases of arm presentation and puerperal convulsions, podalic version was thus performed 40 times in uncomplicated natural presentations in those 500 cases. In 22 cases it was had recourse to to overcome mechanical obstruction; and in 18 because of defect of uterine propulsive power. Let me now state with what results version was followed. In 9 of the 22 cases of contracted brim, the contraction being known beforehand, premature labour was induced about the end of the 8th month, and all the 9 children were born alive and survived. In the remaining 13 of these 22 cases, labour occurring spontaneously at or about the full time, there were 9 living and 4 dead-born children. One patient bore two of these dead children in her first and second confinement. In her third pregnancy premature labour was induced, with the result of having a living child, but as the presentation was that of the breech, version was of course forestalled by nature's kind arrangement. This did not, however, supersede the necessity of much tractile force to effect delivery. In the 18 cases in which version was employed because of inefficient uterine action there is much satisfaction in recording that all the children were born alive, and all the mothers made excellent recoveries. In the 9 cases of induced premature labour there were 2 cases of maternal death—the remaining 7 made very good recoveries. Reviewing the 22 cases of contracted pelvic brim, it will thus be seen that by means of podalic version 18 children were born alive. I am thoroughly convinced that in but a small proportion of those cases would the forceps have availed for delivery, and consequently that the only alternative to version was craniotomy. That during the whole of my 500 cases, with all the difficulties which many of them presented, I was able to avoid this dire resource of the obstetric art, is a fact for which, in its retrospect, I feel profoundly thankful. In the Dublin Lying-in Hospital, under the mastership of Dr Johnson, as reported by Drs Hardy and M'Clintock, we find that on an average in every fifth case of tedious and difficult labour craniotomy was the expedient adopted, podalic version never having been once employed, for the simple reason, we may presume, that its adaptation to such cases was then either unknown or not believed in. With the further knowledge we now possess we cannot help lamenting the immense sacrifice of infant life which accrued from the practice then followed. Similarly, as we peruse and shudder over the long dark roll of 95 craniotomy cases given in the Clinical Midwifery Report of the late Dr Robert Lee of London, we are irresistibly impressed with the conviction, that the employment of podalic version would not only have prevented such a frightful "massacre of innocents," but would have been rewarded, probably in three-fourths of the cases, by the birth of living children. Indeed, that an immense saving of infant life in difficult labours from contracted brim has been effected by turning no longer admits of doubt or denial.

But what in regard to the obviously more valuable life of the mother? This is a question of primary importance, for any procedure adopted to save the life of the child which at the same time, and of necessity, entailed undue hazard to the mother, would by that very fact stand professionally and morally condemned. It is one of the arguments adduced by Sir James Simpson in vindication of podalic version, that it is safer to the life of the mother than craniotomy, and he quotes statistics to show that, while in craniotomy the mortality to mothers had been found to be 1 in 6, in turning it had been only 1 in 16. I regret I am unable to present such a favourable statistical view of maternal mortality consequent on turning. In the 22 cases in which I had recourse to it for contracted pelvic brim, I had 3 maternal deaths—nearly equal to 1 in 7. But, in extenuation of this apparently high ratio of mortality, I have to state—1. That in regard to one of the fatal cases the death seemed altogether independent of, and unconnected with, anything peculiar to the labour, for in all respects the patient progressed most favourably for a week after labour, when a chill from imprudent exposure caused an attack of peritonitis, which proved fatal four days after; and 2. That in both the other cases there was the existence of disease before labour began. While, therefore, craniotomy in those three cases would have deprived three children of life whom version saved, I am unable to believe that this operation, or the use of the long forceps (granting that these could have been used), would have placed any one of the mothers under better conditions for a favourable result.

It would occupy too much space and time to give in detail a report of the 40 cases in which, during the currency of the 500 midwifery cases, I practised version, and whose results I have just summarized. They may be arranged into groups, thus:—

First Group.—Comprising cases of contracted brim, in which labour occurred spontaneously at or about the full time, in number	13
Second Group.—Cases of contracted brim, in which labour was induced at or about the end of eighth month, ...	9
Third Group.—Cases of threatened tedious labour from uterine inertia, ...	18
	40

All I can attempt is to subjoin two or three cases of each group; in other words, to give a part for the whole.

FIRST GROUP.—*Contracted Brim—Delivery at or about Full Time.*

CASE I.—Mrs C., multipara. On my arrival I found the liquor amnii had been evacuated some time before; the head above the brim, and making no descent, although the pains were good. The os uteri was lax and fully dilated. After waiting nearly two hours without any progress, I placed her under chloroform, and performed version without much difficulty. Extraction, however, required considerable effort for some minutes by myself and the nurse. The child was born much asphyxiated, and some time elapsed before respiration was established. A decided projection of the promontory of sacrum was found to exist. The child lived, and the mother made an excellent recovery.

CASE II.—Mrs M. Had been in labour some hours before I arrived. The os was soft and dilatable. The liquor amnii had been some time discharged. Head fixed at brim, notwithstanding good pains. After waiting for a time, and finding no progress, I turned under chloroform, and delivered without great difficulty. Child considerably asphyxiated, but was gradually brought round. Mother made an excellent recovery. This was Mrs M.'s fourth confinement. I attended her also in her third, and delivered in the same way under similar circumstances, and with equally satisfactory results. In her first and second confinement she had been attended by another practitioner, and was delivered on both occasions with forceps, it was said, with much difficulty.

Case III.—Mrs W. C. Head for several hours at brim; projecting promontory of sacrum, with pain somewhat deficient in strength. Liquor amnii discharged an hour or two. Turned under chloroform, and delivered with an ordinary amount of tractile force. Child soon breathed freely. Mother made a good recovery.

Case IV.—B. M. The history of this case was somewhat special. The patient was small in stature and in general development, and presented a conjugate diameter of pelvis seriously compromised by a protruberant sacral promontory. Although unmarried, she had had two confinements during the previous six years, and on each of those occasions, after long attendance by midwife, craniotomy had to be performed—the first time by Dr Key and myself, the second by two of our local brethren. It was quite a serious prospect to our professional staff to have a third time craniotomy to perform on behalf of this patient under the miserable circumstances in which she was placed; but hope dawned upon us from an unexpected quarter. Having had the good fortune to meet Dr Halliday Croom at Brechin in July 1882, on occasion of the anniversary of the Forfarshire Medical Association, I brought the case under his notice, and he kindly offered to receive the patient into the Edinburgh Maternity Hospital for the purpose of performing the again, as it was thought, inevitable craniotomy. A few days before the time fixed on for her departure to Edinburgh, I was met by the midwife in one of our streets, and received from her the very unwelcome intelligence that labour was begun. With much urgency she besought me to "haste to the rescue." Filled with unhappy forebodings of what lay before me, and keenly disappointed that the irony of fate had so signally traversed what really seemed in every respect "the best laid scheme," I went at once to the wretched house in which parturition was to be accomplished. The pains had been for some time regular and strong, and on examination I found the os well dilated, and the head, as formerly, decisively arrested at the brim. The liquor amnii had been discharged for an hour or two. The bones of the head feeling somewhat loose, and therefore compressible, I thought it might be possible to turn, and drag the child through the brim. I accordingly gave chloroform, and performed version. Very much difficulty was experienced in pulling the shoulders and head through the contracted pelvis; but, with the help of the midwife, the feat was accomplished. The parietal bones were found considerably flattened by the pressure to which they had been subjected, and the head consequently elongated. Believing the infant, when born, to be quite dead, I laid it aside, *sans ceremonie*, and gave my whole attention to the poor mother. After a minute or two, despite the severe ordeal it had encountered, and much to my surprise, it distinctly indicated that *it meant to live*,—heaving at first a few feeble gasps, and by-and-by breathing and crying with commendable vigour. The mother made an excellent recovery; and the child, although *not* an illustration of "the survival of the fittest," still continues, after two and a half years, to hold on its way.

SECOND GROUP.—*Labour Prematurely Induced.*

CASE V.—Mrs P. Labour induced at end of eighth month owing to narrow pelvic brim. On being called, I found the os nearly fully dilated, and quite soft. The liquor amnii had begun to be discharged thirty-eight hours before, and had been dribbling away ever since, but pains had only commenced an hour or two before my arrival. Having given chloroform, I performed version with some difficulty. The infant was at first somewhat asphyxiated, but by-and-by respiration was fully established. Mother's recovery very satisfactory. The previous history of this patient is noteworthy and instructive. I do not know the particulars of her first confinement, only that the child was born alive at the full time. I assisted a brother practitioner at her second confinement. The head was arrested at the brim, version was performed, but the child was dead. The third confinement was under my own charge. It was also at the full time; the head was again arrested at the brim; version was performed with much difficulty, and again there was a dead-born child. Being now satisfied that the degree of pelvic contraction existing was incompatible with the birth of a living child at the full time, I resolved, in the event of another pregnancy, viz., a fourth, to bring on labour at the close of the eighth month. This in due time I accomplished, delivered by turning, and had a living child. On the occasion of her fifth pregnancy, I was unfortunately not informed of her condition until she was well advanced into the ninth month. I lost no time in inducing labour and effecting delivery by turning, but the proper time having been allowed to pass, the child was born dead. A sixth, seventh, and eighth pregnancy followed during the five succeeding years, and having been duly informed of her condition, I on each occasion induced premature labour, and delivered by turning, with a successful result both to mother and child.

CASE VI.—Mrs B. Her third labour, artificially induced at end of 8th month, owing to antero-posterior contraction of pelvic brim. On arrival found that liquor amnii had begun to be discharged nearly twenty hours before, and that pains had been slight and infrequent. The os was only partially dilated and difficult to reach. Head high in the pelvis, and did not seem to descend with the pains. Being afraid to wait till the liquor amnii was all discharged, and when the uterus might be tightly grasping the child, I by-and-by gave chloroform, slowly introduced my hand, and with moderate ease accomplished version and extraction. The child was a little livid at first, but soon breathed freely. The mother had an excellent recovery. This patient in her first confinement was delivered by forceps with much difficulty. In her second pregnancy labour occurred, *sua sponte*, at the end of the 8th month, and was accomplished with comparative ease. Acting on nature's hint thus given, labour was artificially induced, as narrated, in her third pregnancy, and subsequently in her fourth, with equally successful results.

CASE VII.—Mrs M'K.; fourth confinement. On my arrival I found that the liquor amnii had been evacuated three hours before. Os uteri about half dilated and rather rigid. After waiting a short time gave chloroform, and slowly dilated the os with the hand, cone-shaped—brought down a foot, and gradually accomplished delivery. The child was soon quite lively. The mother made a good recovery. In this patient there was nothing special in her first confinement. Her second showed a degree of obstruction at the brim, and delivery was accomplished by version with some difficulty, but with a living child. In her third pregnancy (as well as her fourth) labour was induced at end of 8th month, and delivery accomplished by version, with a satisfactory result.

THIRD GROUP.—*Tedious Labour threatened from Uterine Inertia.*

CASE VIII.—Mrs L.; third confinement. Called at 5 A.M., found head at brim, and pains feeble. Returned at 11 A.M., found os now fully dilated, membranes protruding, but head still at brim. Ruptured membranes, and waited some time, when the pains still continuing feeble and inefficient, I chloroformed and turned. Delivery was accomplished with moderate ease, and child was lively from the first. The mother's recovery was in all respects satisfactory. This patient required the forceps in her first labour owing to imperfect uterine action towards its close. In her second the pains were vigorous throughout, and no help was needed.

CASE IX.—Mrs M., a few miles distant in the country. On my arrival I found the head at brim, and owing to feeble infrequent pains making no advance. After waiting two or three hours, and seeing no prospect of a change in the character of the labour, and the patient's spirits becoming depressed, I chloroformed, performed version, and effected delivery with comparative ease. The child breathed well at once. I attended this patient in a previous confinement, when, the circumstances being similar to those now described, I pursued the same practice, with equally satisfactory results

Case X.—Mrs D., primipara. Evening—Pains regular all day, but very feeble; head at brim, os dilated. After some hours waiting, attempted forceps, but failed to apply both blades. I then performed version and delivered without much difficulty. Child breathed well from the first. Mother made an excellent recovery.

Case XI.—Mrs L., residing in the country. Called at midnight; found the os a little dilated and pains almost entirely suspended. When they returned they were feeble and inefficient. After waiting four hours without any promise of improved conditions, and finding the os rather more lax and dilatable, I performed version under chloroform, and delivered with moderate ease. The child was soon vigorous. The mother made an excellent recovery. Several previous confinements in which I attended this patient were accomplished without difficulty, and a subsequent one was over before my arrival.

Case XII.—Mrs W., primipara. Head at brim, pains feeble; liquor amnii evacuated before my arrival. After waiting between two and three hours without any improvement, I chloroformed and performed version with moderate ease, but considerable tractile force was required for delivery. The child was at first asphyxiated, but by-and-by gasped, and soon after respiration was fully established. The mother made a satisfactory recovery.

And so I might go on till I had narrated all the 18 cases in which I employed version for feeble and inefficient uterine action, with advantageous results both to mothers and children. But the limited time of our meeting must impose restraint. The cases I have given will sufficiently exemplify the practice I have pursued. I do not enter on the well-trodden ground of the best mode of performing version, and of the caution necessary to guard against contingent injury to both the lives involved in each case. I have nothing to state on these topics in addition to what is familiar to all. But I may be allowed to remark that, from the experience I have had, I firmly cherish—and have long cherished—the conviction that midwifery possesses in podalic version an aid in many of its pressing difficulties, the full value of which is in all probability not yet sufficiently appreciated. No doubt it is competent to any opponent to allege, in regard to the cases of mere uterine inertia in which I employed it, that a little more patience would have been rewarded with successful results, without manual interference and its attendant risks. Possibly so; but I am equally entitled to maintain that had I refrained from the procedure I adopted I might have had to interfere at a subsequent stage of the labour, when all the circumstances of the case were less favourable for so doing, and when the chances of safety, both to mother and child, were greatly diminished. For it is an established fact, and ought never to be forgotten, that maternal and fœtal mortality proceed at an advancing ratio according to the time the labour has been allowed to continue before operative help has been given. In midwifery practice it will often prove a question beset with much difficulty, and at the same time one imperatively demanding *yea* or *nay* in reply—Can this case be safely or prudently left to the powers of nature, or ought artificial aid to be rendered, and nature's efforts supplemented? The teachings of the class-room, and the canons laid down for our guidance in text-books, will often fail us in such emergencies; and we shall find ourselves thrown on our own individual judgment for the counsel and direction we desiderate. Moreover, not only all the training and all the experience, but all the self-possession of the accoucheur, will ofttimes be needed in order that he may arrive at a just decision in any given case. And every conscientious practitioner will not only regard it as an object of intelligent interest, but will feel it an imperative obligation, afterwards to determine whether the decision he adopted, and the course he pursued, stand vindicated by the result. With such general remarks I now leave the practice I have been commending to the verdict of my brethren.

Let me adopt as a fitting close to this paper the words of Dr Keiller, a name well known and justly esteemed over broad Scotland and beyond it, and doubtless nowhere more highly than in his native town:—"Of all our obstetric aids none are so handy or so safe as that which we can never attend any case without, namely, the hand. I have been getting more and more convinced that a well-trained, well-directed hand, might in a much greater measure than is generally supposed supersede the use, by accomplishing the work, of other and less convenient instruments. And when we consider that, unlike the touch of cold, hard, unfeeling steel, it possesses a specially keen sense to guard and guide the maternal and fœtal parts on every side, the objections urged against its almost entire efficacy may well be disputed. . . . . The single, well-conditioned, well-practised hand will outdo and prove more than a match for a whole armoury of special weapons."[1]

IV.—SPHYGMOGRAPHIC TRACINGS IN PUERPERAL ECLAMPSIA.

By J. W. Ballantyne, M.B., C.M., Buchanan Scholar.

(*Read before the Edinburgh Obstetrical Society, 14th January* 1885.)

In the three following cases of Bright's disease, complicating pregnancy, parturition, and the puerperium, I was enabled to make a series of sphygmographic tracings, and to gather from the consideration of these sphygmograms some indications as to the condition of the blood pressure and the pulse in this comparatively rare affection.

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[1] Inaugural Address by Dr Keiller to the Obstetrical Society of Edinburgh, Session XXXI.

In the first case which came under observation during the pregnancy, prophylactic measures were adopted, and the parturition and puerperium were accomplished without the appearance of any eclamptic phenomena. In this case I obtained tracings during the pregnancy and puerperium.

In the second case, eclamptic seizures of a most serious kind supervened, and proved fatal to both mother and child in a remarkably short space of time. Here I was able to make sphygmographic observations during the course of the labour, and during the few hours which intervened between the birth of the child and the death of the mother.

In the third case, in which the labour also was rendered most dangerous from the appearance of eclampsia, but in which the result to the mother and child was most satisfactory, I was unable to take any tracings during the parturition, but obtained a complete series of observations during the puerperal period.

Putting the three cases together, I have, therefore, obtained tracings during all the three periods, namely, during pregnancy, parturition, and the puerperium; and in the hope that these observations may prove of some value in elucidating certain vexed questions in connexion with puerperal eclampsia, I venture to bring them before this Society.

In making these tracings I used Dudgeon's pocket sphygmograph, which I have found to be the only instrument that one can with ease and safety make use of in the case of a woman in the second stage of labour. It is easy of application and manipulation, and the results obtained are quite trustworthy. It has one fault, and that is, that we are unable to use it for testing the pressure which is necessary to obliterate the pulse, since the highest pressure which we can bring to bear upon the artery is one of five ounces, and it would be therefore necessary, in order to complete these observations, to use a sphygmomanometer (such as that of Basch) in order to estimate the blood pressure. I was led to adopt Dudgeon's instrument chiefly from the good results which Lebedeff and Porochjakow obtained from its use in their observations upon the "Blood Pressure in Parturition and the Puerperium in relation to Pulse, Temperature, and Respiration," recorded in the *Centralblatt für Gynakologie* (No. 1, January 5th, 1884); and I feel convinced that I should not have been able to obtain the tracings which I show to-night with the more cumbrous instrument of Marey. Dudgeon's sphygmograph is so small that it can be carried in the pocket, it is cheap, and with it accurate observations can be made easily and almost as quickly as the pulse can be felt with the finger. With these few words of introduction I shall proceed to relate the cases above mentioned, and to consider the pulse tracings obtained during their progress.

On June 30th, 1884, a case of Bright's disease complicating pregnancy was admitted into the Buchanan Ward of the Royal Infirmary. The following are a few short notes of the case:—

Mrs R., 23 years of age, was eight months advanced in her second pregnancy. On the 28th of May she first noticed that her feet, legs, hands, and face were much swollen, and at that time also she suffered from pain in the loins, and observed that her urine was small in amount and dark in colour. She applied to a medical man, who gave her some medicines which increased the quantity of the urine and lightened the colour of it; but the swelling of the limbs and face still remaining, she came for advice to Professor Simpson, and was admitted to the Buchanan Ward as above noted. The urine, on being boiled, became almost solid, from the large amount of albumen present in it. On microscopic examination some epithelial tube casts were found. The quantity of urine passed in the twenty-four hours was small (about 15 oz.); it had a low specific gravity and a clearly acid reaction. The heart was slightly enlarged, and in the mitral area a soft double murmur was heard accompanying the first sound; there was also a reduplication of the second sound in the aortic, but more especially in the pulmonary area. She was eight months pregnant, and the fœtal heart was most distinctly heard above the umbilicus on the right side. Bright's disease complicating pregnancy having been diagnosed, the patient was put upon an exclusively milk diet, and was given tincture of the perchloride of iron in 20 minim doses thrice daily. She was also kept at rest. Under this treatment the whole condition improved, and the amount of albumen gradually decreased. Seven days after admission the patient was confined of a small female child, without any sign of an eclamptic fit appearing. The puerperium also was perfectly normal, and the patient left the Infirmary eleven days after confinement, with scarcely a trace of albumen in the urine, and with an improved condition of the heart, *i.e.*, the murmurs had disappeared in the mitral area, and there was only slight accentuation of the second sound in the pulmonary area. The child lived for five days.

During the progress of this case I was only able to get three sphygmographic tracings taken, two before and one after the confinement. The two first tracings (*vide* Figs. 1 and 2) were made five days before parturition, and show very well the high tension pulse characteristic of Bright's disease. There is a well-marked tidal or predicrotic wave, and a slightly marked dicrotic. These features are brought out best with a pressure of 2 oz., as seen in Fig. 2. The high vascular tension at this time was probably due to two causes — (1), the difficulty of arterial outflow, arising from the condition of the kidneys; and (2), the hypertrophy of the heart due to the pregnancy and to the Bright's disease. In the third sphygmogram (Fig. 3), taken some twelve hours after delivery, there is seen the marked fall in vascular tension which is characteristic of normal parturitions, it is true, but which is particularly characteristic of the pulse during the first few hours after a delivery which has been complicated by renal, cardiac, or pulmonary mischief. I was unable to get sphygmograms of this case taken continuously, therefore I do not place much faith in the conclusions drawn from them, and simply record this case as the only one of Bright's complicating labour in which I obtained any tracings at all during the pregnancy.

The second case of Bright's disease complicating pregnancy and labour was a much more serious one, for it terminated in an attack of eclampsia, which, with an advent as unexpected as that of a tropical thunderstorm, assailed the patient (to all appearances in a state of perfect health), and, running its course unchecked by most vigorous therapeutic measures, proved fatal to both mother and child within the short space of twenty-eight hours.

CASE II.—M. S., a well-built, fine-looking girl of eighteen years of age, was seven months advanced in her first pregnancy, and was apparently in the enjoyment of good health. She was employed in a printing-office, and on Saturday, October 25th, 1884, she tripped over a plank of wood in the office and bruised herself somewhat severely. About this date also she remarked to her father that her ankles were swollen at night when she took off her boots. On the afternoon of Sunday, November 2nd, as she was going upstairs to visit a friend, she said to a little girl who was with her, "My feet are away up at the top of that shed," pointing to a building some distance away. She, however, went upstairs without any assistance, but had not been in her friend's house many minutes when she took a violent fit. A medical man was sent for, who prescribed some medicine. She, however, continued having fits about once in every ten minutes, and on the doctor's return at 7 P.M. he saw her in one of these attacks, and fully realizing the gravity of the case, he called in Dr Hart, who on his arrival at 11 P.M. recommended her immediate removal to the Maternity Hospital.

The following was her condition on admission into the Hospital at about a quarter past one on Monday morning:—She was unconscious, the mouth was tightly closed, the face alternately flushed and pale, and the pupils widely and equally dilated.

She was at once put to bed, and the administration of chloroform, which had been with difficulty commenced in the cab during her conveyance to the Hospital, was continued. Before, however, the chloroform had time to act, she was seized with a very well-marked eclamptic fit. The eyelids began to twitch, the pupils contracted, the head was moved quickly from one side to another, and then the clonic spasms proceeded to affect the upper and lower limbs. The face became cyanosed, the breathing stertorous, and the pulse intermittent. Tetanic spasms appeared intercurrently with the clonic, and it was during one of these tetanic seizures that I obtained with considerable difficulty the first sphygmographic tracing (Fig. 4). This sphygmogram was taken just before she passed out of the fit into the state of sopor following it. This seizure took place about 1.40 A.M., and lasted fully five minutes. The inhalation of chloroform was continued, and as the teeth were being ground fiercely together, a cork was introduced to prevent her biting her tongue. On making a vaginal examination, the os uteri was found to be of the size of a sixpence, and the cervix thinned out and stretched over the fœtal head, which was low down in the pelvis and lying in the left occipito-anterior position. On auscultation over the abdomen the fœtal heart could not be heard; but so loud was her stertorous breathing that one could not be absolutely certain of this observation. The maternal heart-sounds also were inaudible from the same cause. The catheter was passed into the bladder and a few drops of urine obtained, which, on boiling, became almost solid from the presence of a large quantity of albumen. She was then given one minim of croton oil on a piece of loaf sugar, and two drachms of chloral hydrate. She had also one-sixth of a grain of pilocarpin injected hypodermically. The administration of chloroform was continued, hot bottles wrapped in wet cloths were placed around her, and digitalis fomentations were applied to the loins. Attempts were made to dilate the os both digitally and by means of Barnes' bags, but with little success, the margins of the os being very firm, sharp, and rigid. We had, therefore, to content ourselves with the free application of unguents to the parts, and the use of vaginal douches. The temperature at this time, 2 A.M., was about 101°·4, the pulse 156, and the respirations 60 to 80 per minute. She had numerous incomplete fits while under the influence of the chloroform, the seizures coming on especially when any vaginal examination or other manipulation was made.

At 5.30 A.M. the os was found to be as large as a shilling. The skin was acting freely, and the bowels had moved several times. The chloroform was still continued, as any cessation in the administration of the anæsthetic caused a return of the eclamptic attacks. The temperature at this time was 101°·8, pulse 120, and respirations 70 per minute.

At 8 A.M. the os was felt to be dilating slowly, and at 9 A.M. it was fully dilated. The membranes had ruptured, and the waters escaped before patient was admitted to the Hospital. The temperature was now 101°·4, and the respirations 43 per minute. A large quantity of frothy mucus and saliva was dribbling from the mouth, and the breathing was still loud and stertorous. About 5 ounces of urine were drawn off by means of the catheter. On boiling, the urine was found to contain at least 50 per cent. albumen, to be acid in reaction, and to have a specific gravity of 1020.

Professor Simpson and Dr Hart saw the patient at ten o'clock, and as the head was now on the perineum, the former was of opinion that the labour would be completed by the natural efforts, and that forceps would be unnecessary. The head was born at 11.10 A.M. and the body five minutes later, the uterus being assisted to contract by supra-pubic pressure. Twenty minims of ether and 15 minims of ergotin were injected hypodermically. The child was still-born, and although efforts were made to resuscitate it by Schultze's method, these proved of no avail.

The placenta was delivered by Credé's method at 11.45 A.M. The vagina was washed out with the corrosive sublimate solution, and hot milk and digitalis were given by the mouth. Temperature was now 102°, and pulse 104. Patient was lying in a comatose state, with face and lips in a very livid condition, and the breathing was loud and stertorous. Chloroform was discontinued immediately after the birth of the child, and no fits occurred from that time till her death.

The rest of the history of the case may be summarized as an unsuccessful attempt to save the patient by means of stimulants, for she gradually sank and died at 9.25 P.M., ten hours after delivery, and twenty-eight after the first eclamptic seizure.

1 P.M.—15 min. ether hypodermically, and hot milk; temp. 101°·6.

3 P.M.—10 min. ether. Poultices applied to chest, as there were marked signs of pulmonary œdema.

3.30 P.M.—1-90th gr. sulphate of atropia injected. Temp. 102°, pulse 140, thready and dicrotic.

4 P.M.—Discharge from mouth and nose less marked.

4.20 P.M.—She opened her eyes for a few minutes, but did not speak.

5 P.M.—Still copious watery discharge from mouth and nose. Poultices to chest continued.

5.30 P.M.—1-90th gr. sulphate of atropia given hypodermically.

6.15 P.M.—15 min. of digitalis by mouth.

7.30 P.M.—15 min. of ether hypodermically.

9.25 P.M.—Died, never having regained consciousness.

The post-mortem examination was made thirty-six hours after death by Dr Byrom Bramwell, and the following were the appearances seen:—The pericardial sac contained ½ oz. of clear serum. The cavity of the left ventricle was normal, but the wall was hypertrophied (⅝ in.) The right heart was healthy. Cone diameters of mitral 1·4, aorta ·9, tricuspid 1·65, pulmonary artery 1·1. The heart weighed 10 oz. The left pleural cavity contained 2½ oz. of clear serum, and the right 2 oz. The left lung weighed 1 lb. 4½ oz., and was heavy for its size. There was solid œdema and some congestion of the lower lobe, and a less degree of œdema of the upper lobe. The right lung weighed 1 lb. 7½ oz., and presented very much the same appearance as the left lung, but was not quite so solid. There were traces of old inflammatory disease

at the apex, and some of the bronchi were diseased. The liver weighed 3 lbs. 12 oz., was slightly fatty, but otherwise normal. The spleen weighed 3½ oz., and seemed normal in appearance. The left kidney weighed 5½ oz.; the capsule stripped off easily, and on section the cortex was seen to be very pale, whilst the pyramids were congested. The whole organ was tough and distinctly diseased, as far as could be made out with the naked eye. The right kidney presented similar appearances. The uterus was large in size, reaching to a point half-way between the symphysis pubis and the umbilicus. There were no signs of sepsis or peritonitis in the abdomen. On removing the skull-cap the brain convolutions were seen to be somewhat flattened out, but not otherwise abnormal. The superior longitudinal and all the sinuses within the cranium contained pale gelatinous clots. The brain weighed 2 lbs. 14 oz., and on section was seen to be œdematous, and felt softer than normal; the lateral ventricles were slightly enlarged, and the gray substance paler than usual. The cerebellum was also soft and œdematous. The retinæ and optic discs were normal. The sympathetics of the abdomen and neck were removed by Dr Bramwell for microscopic examination.

We may now consider the tracings obtained during the progress of this case. Of these sphygmograms, fifteen were taken during the first stage of the labour, three during the second stage, and four were obtained nine hours after the completion of the third stage. Those taken during the first stage are most remarkable in many ways, and must be considered in detail.

Fig. 4 represents a tracing taken during one of the tetanic spasms of the only well-marked and complete eclamptic seizure which the patient had after her admission into the Hospital. It shows an irregular, small, and rapid pulse, possessing nevertheless high arterial tension, as shown by the blunting of the apices and the merging with them of the tidal wavelets. The aortic notch is absent altogether in most of the curves, and only slightly marked in the remainder. Undoubtedly some of the peculiarities of this tracing are due to twitchings of the muscles of the forearm; still many of the curves are uninfluenced by these twitchings, and show clearly enough that we have to do with an artery containing a small quantity of blood, but blood in a state of high tension. Towards the end of the tracing, also, it can be seen that this state of high tension is passing off, and the pulse becoming almost dicrotic. This sphygmogram, perhaps, resembles most of all the tracing obtained during the rigor of fevers, or that seen in peritonitis.

The next pulse-tracing (Fig. 5) was taken shortly after the preceding, and immediately after the cessation of the muscular jerkings and twitchings. It also has the characters of a small pulse of high tension; but it has become somewhat slower and almost quite regular. The respiratory base line also shows no rise and fall. The high arterial tension in these two tracings may be very well demonstrated by Mahomed's useful method.

Tracing No. 6 was taken a few minutes later, and shows a marked change of conditions. The pulse is now somewhat larger, its rapidity is much diminished, and neither the tidal nor the dicrotic wavelet is very pronounced. It will also be noticed that every fourth beat is longer than the three preceding it, every third beat than the second, etc., and that the respiratory base-line now exhibits a slight rise and fall. The apex has regained its pointed character, and the tension, although still high, is distinctly less than in tracings 4 and 5.

Tracing No. 7 was taken about half an hour later during a slight fit, probably synchronous with a uterine contraction. The pulse curve has again considerably changed its character. It is still a small pulse, but it has now lost its high arterial tension, as evidenced by the appearance of a well-marked dicrotic wavelet following a sudden fall from the apex. It is much more rapid, and is distinctly irregular, some of the curves being fully, and others partly dicrotic—that is to say, in some the tracing falls to the respiratory base-line, and rises again in the dicrotic wavelet, whilst in others it does not quite reach the base-line before the supervention of the second wave. It must be remarked that the fit in this case was a very slight one indeed, the patient being at the time fully under the influence of chloroform.

Tracing No. 8 was taken one and a half hours later, and shows that the fall in tension noticed in No. 7 is continuing. The tracing shows beautifully the full dicrotic pulse occasionally becoming hyperdicrotic in character, and resembling very much that seen in advanced stages of pernicious anæmia. The fall of the base-line with inspiration, and its rise with expiration, is quite easily made out. Nos. 9, 10, and 11 show tracings with the same characters.

No. 12 is a most remarkable tracing, and was taken two hours later, when the first stage was approaching its completion, and the patient was in a state of great exhaustion. The pulse is extremely rapid, reaching 198 beats per minute: nearly every beat is distinctly hypertrophic, showing a state of great depression of the vascular system seen sometimes after hæmorrhage in typhoid fever and a few other rare conditions. The aortic notch is now below the base-line, and the predicrotic wavelet is very feebly marked. The respiratory curve is very well seen, there being a fall with inspiration at every fourth beat, as a rule.

No. 13 was taken one minute after No. 12, and No. 14 one minute later. They both show a tracing with the same characteristics as No. 12, with the exception that the pulse is somewhat slower, and the respiratory curve even better seen. Some of the curves are fully dicrotic, others hyperdicrotic. The temperature at the time that these tracings were taken was 101°·8, and the respirations 40 per minute. No. 15 shows effect of a small pressure (2 oz.)

We now pass on to consider the tracings obtained during the second stage of labour, which were three in number. They were taken at 9.40, 9.42, and 9.43 A.M. respectively, before, during, and immediately after a uterine contraction; they therefore show very clearly the effect of a pain upon the pulse curve in this case. Of these Nos. 16 and 18, taken before and after the pain, are almost identical. They show a fully dicrotic, occasionally hyperdicrotic, sphygmographic tracing with a respiratory curve almost as well seen as in the tracings obtained in cases of spasmodic asthma. She was breathing very stertorously at this time. The predicrotic wavelet is very feebly marked. The aortic notch is either on or below the base-line, and scarcely any part of the tracing lies above the line joining the apex and the aortic notch. In No. 17, the effect of a uterine contraction upon the pulse curve at this stage of the illness is well brought out. There is a slight increase of the arterial tension, as shown by the slightly more marked predicrotic wavelet blended with the apex. The dicrotic wavelet is not so clearly marked as before and after the pain. All the preceding tracings, with the exception of No. 4, were taken while the patient was under the influence of chloroform, and the later ones were in addition complicated by the fact that various medicines had been administered. The anæsthetic was discontinued immediately after the completion of the labour, and four sphygmographic tracings were taken nine hours later—that is to say, one hour before death. As these tracings are almost identical, we shall describe one only, namely, No. 20. In this sphygmogram we have an example of a monocrotic tracing which is produced by the quickening of a hyperdicrotic tracing to such an extent that the second beat is lost altogether. It is, of course, characteristic of an extremely low tension. It will be noted that the pulse was now regularly irregular, every fourth beat being much smaller than the three preceding. The ascent and descent of the respiratory base-line are well seen. It must be remembered that this condition of the pulse supervened notwithstanding the administration, at frequent intervals, of various stimulants, chiefly digitalis, brandy, and ether.

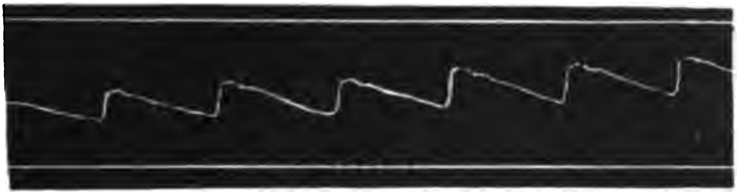
The patient gradually became altogether pulseless, and died one hour after the taking of the last-mentioned sphygmogram. I shall summarize the information derived from these tracings at the end of this paper after I have narrated the third case of Bright's disease complicating pregnancy, parturition, and the puerperium, in which I was enabled to make sphygmographic observations.

At 10 P.M. on January 4th (ten days ago), I was summoned by Mr Macbeth Moir, one of the Maternity pupils, to an extern patient who was, he said, in strong convulsions. On our way to the case he acquainted me with the following particulars:—

The patient, Mrs W., a primipara of 24 years of age, was seized with slight labour pains during the forenoon of January 4th. The membranes broke and the waters came away in the early morning, and in the afternoon the pains became more severe, so she applied at the Hospital, and Messrs Morgan and Moir were sent to the case. During the few days preceding labour she had suffered from nausea and headache, but had had no visual disturbances. She had noticed during her pregnancy that her legs were considerably swollen, especially near the ankles, and that her urine was small in amount and dark in colour. A vaginal examination made at 4 P.M. disclosed the following facts:—The head was presenting in the right occipito-anterior position, the os uteri was about the size of a shilling, and the anterior lip of the cervix thick and œdematous; the pains were strong, and were acting efficiently in dilating the os. Labour proceeded slowly; at eight o'clock the os was as large as a half-crown piece, and at 9.30 patient desired to micturate, and while doing so was suddenly seized with violent convulsive fits. Her face became cyanosed, there were twitching movements of the facial muscles, the head was jerked from side to side, and the arms and legs were rapidly flexed and extended. It was at this point that I was sent for.

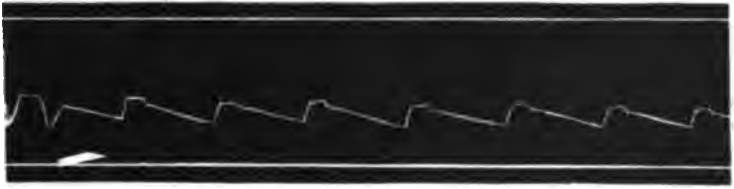
On our arrival we found the patient lying passive, but breathing in a stertorous manner. The face was white and puffy, and there was marked œdema of the eyelids. As signs of an impending eclamptic attack appeared, the administration of chloroform was commenced. On making a vaginal examination I found the os almost fully dilated, the head low down and in the right occipito-anterior position, and the head mouldings very well marked. I determined to complete the labour as soon as possible, and therefore dilated the os digitally, pushed it up over the head, and applied the axis-traction forceps. I succeeded in delivering a large and healthy male child at 11.15 P.M., and removed the placenta from the uterus a few minutes afterwards. The anæsthetic was now discontinued, ergotin was given, and the vagina and uterus douched out with corrosive sublimate solution. During the application of the forceps there occurred several abortive eclamptic seizures, masked to a great extent by the chloroform narcosis. Twenty minims of ether were given hypodermically, as the pulse, which during labour was hard and full, was now very weak and thready. I had not my sphygmograph with me, so was unable to obtain any tracings during the labour. The temperature after the termination of the labour was 99°·6, and the pulse 82; breathing loud and stertorous. A few drops of urine were obtained, which contained a large percentage (75 per cent.) of albumen and some blood, was acid in reaction and dark in colour; epithelial tube casts also were found in small amount. She was ordered a mixture

1.



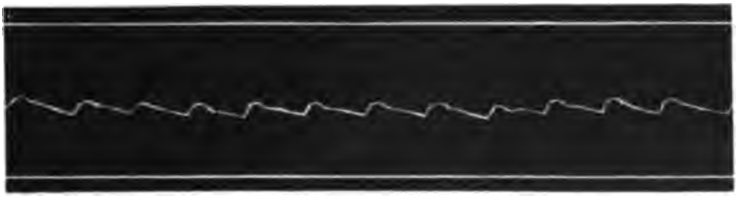
Mrs. R.—Bright's disease in pregnancy. Pulse of high arterial tension. (2½ oz.)

2.



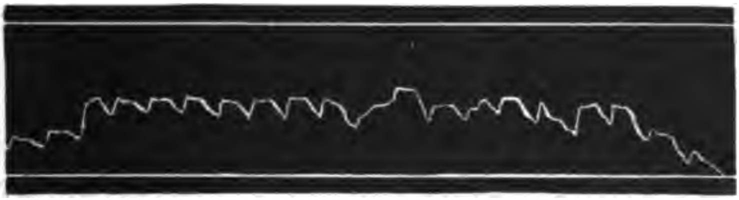
Mrs. R.—The same pulse under a slightly lower pressure. High tension character well seen. (2 oz.)

3.



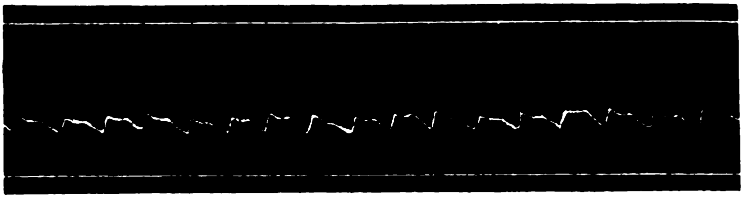
Mrs. R.—Tracing obtained twelve hours after delivery. A smaller, quicker pulse of decreased tension. (1½ oz.)

4.



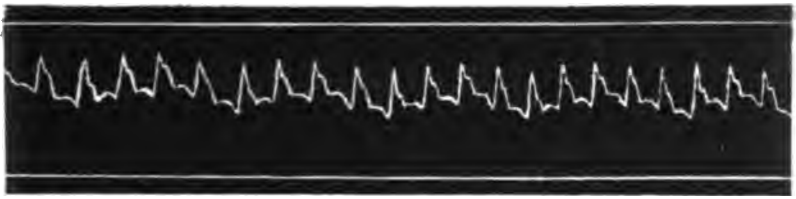
M. S.—Eclampsia complicating labour. First stage. Eclamptic fit passing into state of sopor; shows small pulse of high arterial tension—some irregularities, due to muscular twitchings. (3 oz.)

5.



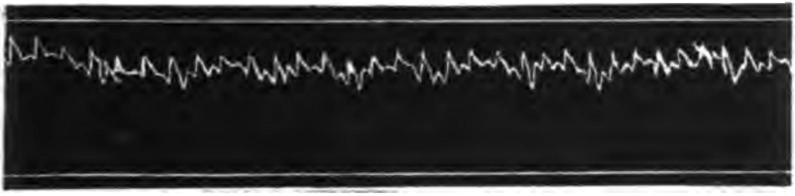
M. S.—Tracing taken in interval between fits, during administration of chloroform, high tension continuing. ([illegible] oz.)

11.



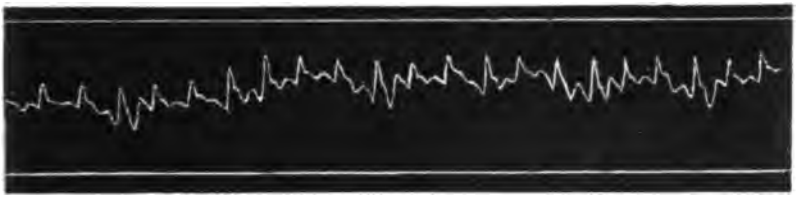
M. S.—Similar to Nos. 8, 9, and 10. Hyperdicrotic occasionally. (5 oz.)

12.



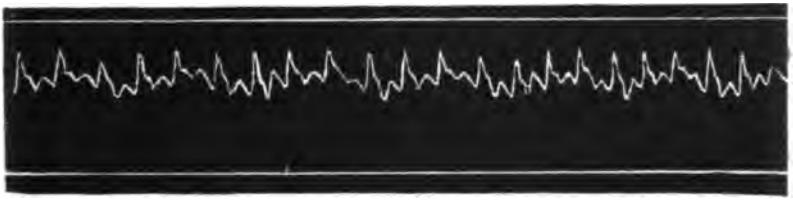
M. S.—First stage approaching completion, very rapid, small and hyperdicrotic pulse, rate 198 per minute. Deeply under chloroform, respiratory curve seen, pressure necessary to bring out characters is high. (4 oz.)

13.



M. S.—One minute later, not so rapid, characters similar to No. 12. (4½ oz.)

14.

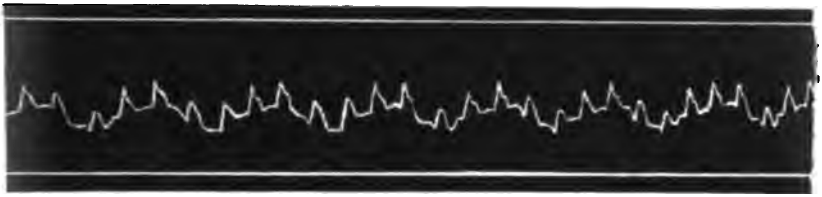


M. S.—One minute later than No. 13. Similar characters. (5 oz.)

15.

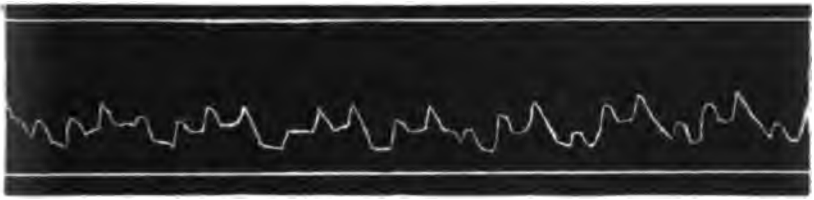
M. S.—Same pulse as in Nos. 12, 13, and 14, to show effect of a lower pressure. (2 oz.)

16.



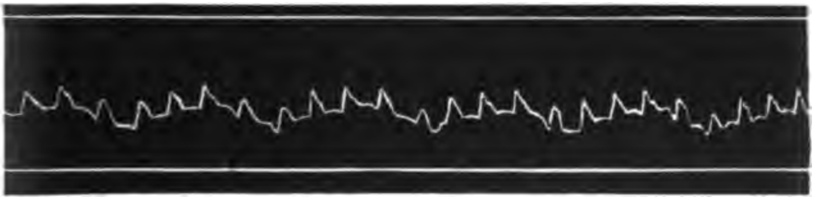
M. S.—In second stage of labour. Taken before a pain; dicrotic and hyperdicrotic in character. Respiratory curve very strongly marked, almost like that seen in spasmodic asthma. (3 oz.)

17.



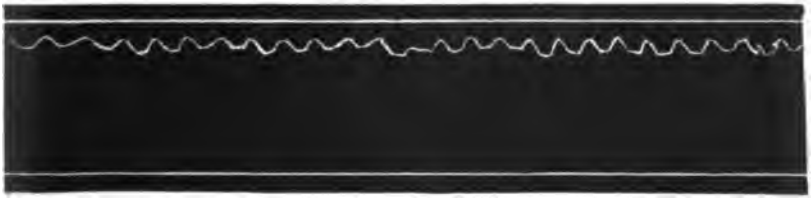
M. S.—Taken two minutes after No. 16, during a pain; slowing of pulse, slight increase in tension. (3 oz.)

18.



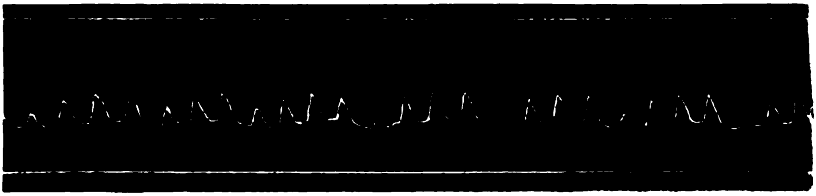
M. S.—Taken one minute after No. 17, same characters as No. 16. (3 oz.)

19.



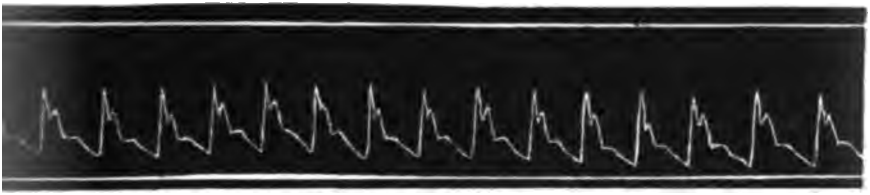
M. S.—Tracing taken nine hours after delivery, and one hour before death. Monocrotic pulse; pressure in this tracing was not great enough to bring out characters well. (1 oz.)

20.



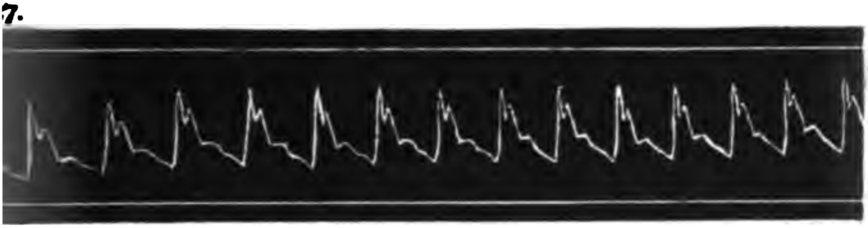
M. S.—Same. The second beat of a hyperdicrotic pulse is now lost, and pulse is distinctly monocrotic, regularly irregular. (1½ oz.)

6.



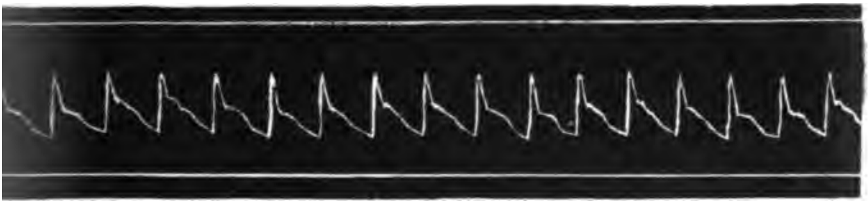
Mrs. W.—Same as No. 25. (5 oz.)

7.



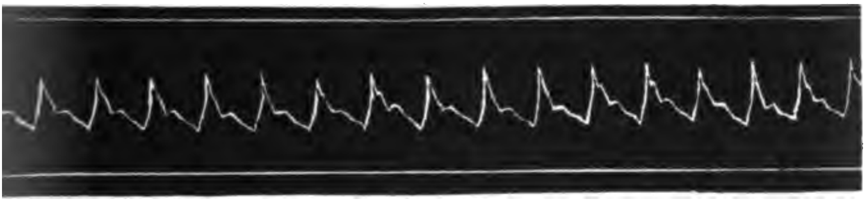
Mrs. W.—Best example of high tension pulse obtained in second day of Puerperium, six hours after No. 26. (4½ oz.)

8.



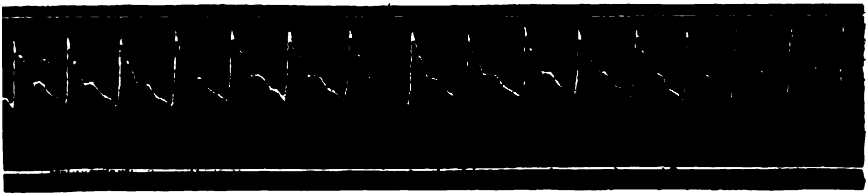
Mrs. W.—Third day of Puerperium. Temperature at this time 102° F.; low tension pulse resembling that of first day. (2¾ oz.)

29.



Mrs. W.—Third day of Puerperium; similar to No. 28. (5 oz.)

30.



Mrs. W.—Fourth day of Puerperium; resembling the tracing on third day, but slight improvement in volume and tension. (3 oz.)

ontaining digitalis, iron, and squills, in order to get the kidneys to ct, and croton oil to act as a purgative. During the first four ays of the puerperium she lay in an almost comatose condition. he temperature continued high, ranging from 100° to 102° F., and he pulse varying in rapidity from 90 to 120 beats per minute, egular, but weak and dicrotic. She was given drachm doses of randy, and as a distressing short cough developed itself, due to a ertain amount of pulmonary œdema, an expectorant cough mixture was ordered. From the fourth day of the puerperium up to the present date (tenth day) she has continued to improve. She is now quite conscious, but has no recollection whatever of the dangers through which she has passed. She is suckling her child, and the cough and expectoration have almost disappeared. The urine now contains still about 10 per cent. albumen, is acid in reaction, has a specific gravity of 1030, and contains numerous fatty epithelial cells and detritus. Sphygmographic tracings have been taken during the progress of the puerperium, at first twice and thrice a day, and later on only once. The fact that the case was an extern one has prevented us making more extensive observations, but those that we have obtained are sufficiently interesting to merit a record being made of them.

Forty-five tracings in all were made: of these seven were taken during the first day of the puerperium, nine during the second, seven during the third, eight during the fourth, five during the fifth, four during the sixth, and five during the eighth day of the puerperal period. Those taken twelve hours after the termination of the parturition (Fig. 21) show all the characteristics of a moderately full pulse of low tension. The characters are best brought out with a pressure of four or four and a half ounces. The up-stroke is almost perpendicular, showing that the left ventricle is forcibly propelling the blood into the artery; the apex or primary ventricular wave of Mahomed is pointed; the line of descent then falls suddenly till the aortic notch is reached with only a slight indication of a predicrotic wavelet—this sudden fall being due either to the rapidity with which the blood leaves the arterial system and passes into the capillary districts, or to the presence of a certain amount of aortic regurgitation. The tracing, having in the aortic notch almost reached the base-line, rises again in a slight dicrotic or aortic systolic wave, giving thus to the sphygmogram the character of a feebly dicrotic pulse. In fact these tracings are not unlike those obtained in pernicious anæmia or in aortic regurgitation, the artery being almost empty during diastole. The pulse is regular, and has a rapidity of 120 beats per minute. Temperature was at this time 99°·6.

In the evening, when tracing 22 was taken, the temperature had risen to 100°·4. The pulse has now changed its character slightly. The apex is still pointed, and there is still a suddenly falling line of descent, but the descent is now more gradual, and is interrupted by a feebly marked predicrotic and by a dicrotic wave. She was at this time taking brandy, digitalis, and iron, which may account for the slight improvement in the tracing. The skin and kidneys were at this time acting freely, and there had been one motion of the bowels. On the second day of the puerperium, when nine tracings were made, the pulse curve showed a marked change (*vide* Figs. 23, 24, 25, 26, and 27). The tracings now show the characters of a pulse of high arterial tension, requiring a pressure of 4¾ or 5 oz. to make these characteristics manifest. There is a much more gradual line of descent interrupted by a well pronounced predicrotic wavelet and a moderately well marked dicrotic following the aortic notch. The pulse is much slower, is quite regular, and has all the characteristics of the tracings obtained in chronic Bright disease. The temperature during the second day of the puerperium varied from 100° to 100°·4 F.

On the third day of the puerperium there was again a sudden change in the characters of the pulse wave synchronous with a considerable rise in temperature, the thermometer registering 102° F. (*vide* Figs. 28 and 29). The tracings obtained on this day have all the characteristics of a low tension pulse. There is the sudden fall from a pointed apex, the feebly marked tidal wavelet, the aortic notch close to the base-line, and the fairly well marked dicrotic wave.

On the fourth day, there was a slight improvement in the pulse wave, increasing as the day wore on. These tracings (Figs. 30, 31, and 32) have nearly the same characters as those taken on the third and first days of the puerperium. In Fig. 31 it will be noted that the up-stroke bends backwards, showing that the ventricular systole is sharp and sudden.

Five tracings were taken on the fifth day (the date at which she recovered consciousness and intelligence), which show a further slight improvement, The pulse, now much fallen, requires a pressure of 4 oz. or 4½ oz. in order to bring out its distinguishing features. Fig. 33 is interesting as showing the effect of a cough upon the respiratory base-line, there being a sudden rise in the pressure during the forced expiratory effort (*i.e.* the cough) and a fall afterwards.

On the sixth day there is a very marked improvement in the tracings, the line of descent being now much more gradual, and the predicrotic wavelet as well marked as the dicrotic (*vide* Fig. 34). A pressure of 4½ oz. is now required to make manifest the peculiarities of the sphygmogram.

The tracings taken on the eighth day of the puerperium show a pulse wave of a better tension than that upon any other preceding day of the puerperal period, with the exception of the second day. There is now a markedly high arterial tension, although the pulse itself is full (*vide* Fig. 35). In fact, these tracings closely resemble those taken during the pregnancy in the first case narrated in this paper, differing, however, in rapidity. The line of descent is much more gradual, and the aortic notch is high above the base-line. We may therefore conclude that the pulse in this case is returning to the condition in which it was before the advent of labour, and that the danger from the parturition is now nearly past.

From the preceding cases, although only three in number, we may venture to draw the following conclusions:—1st, That during a pregnancy complicated by Bright's disease, there is a pulse tracing of high arterial tension, even when the volume of the pulse is small; 2nd, That during the first stage of labour complicated by eclampsia, the sphygmographic tracings show a small pulse of high tension, usually regular, and closely resembling that seen in the rigor of acute fevers, and in peritonitis; 3rd, That during an eclamptic fit, at any rate during the tetanic part of it, the tension is considerably increased, as evidenced by a flattening of the apices and a prominence of the predicrotic wavelets, and the rapidity of the pulse is somewhat increased and the regularity lost; 4th, That during the intervals between the attacks the tension falls, and the pulse becomes slower and more regular; 5th, That if the first stage be prolonged and the eclamptic attacks be frequent, the blood tension falls in a very remarkable manner, and the sphygmographic tracings become fully dicrotic and even hyperdicrotic; 6th, That this dicrotic pulse is also one of extreme rapidity (200 per minute), and very small volume, resembling the pulse in cases of severe hæmorrhage after typhoid and some other fevers; 7th, That during the second stage of labour in such a severe case the character of the pulse tracing remains the same; 8th, That the effect of a uterine contraction in the second stage upon the pulse curve is similar to the effect of an eclamptic fit, with this difference, that the pulse becomes slower and does not become irregular; 9th, That the effect of the stertorous breathing in such cases is to cause a rise and fall in the respiratory base-line, producing a sphygmographic tracing closely resembling that seen in spasmodic asthma; 10th, That after the completion of labour there is a great tendency to complete collapse, and that this unless checked will go on till death closes the scene; 11th, That in serious cases even the free use of stimulants proves insufficient to arrest this downward progress; 12th, That the sphygmographic tracings obtained immediately before death are distinctly monocrotic, from the quickening of a pulse of hyperdicrotic character; 13th, That in less serious cases where the patient is put under chloroform at once, and the labour quickly terminated by forceps or other means, a good result may be anticipated and the collapse lessened, if not quite averted; 14th, That during the first day of the puerperium the arterial tension is very low and the pulse curve dicrotic; 15th, That on the second day (thirty-six hours after death) the tension may rise in an extraordinary manner, so that the pulse tracing comes closely to resemble that seen in the pregnancy; 16th, That the pressure falls again on the third day, and the tracing becomes again fully dicrotic; 17th, That if suitable treatment be adopted, the tension gradually rises during the rest of the puerperium, until finally we again get a tracing of high tension like that seen in the pregnancy; 18th, That there seems to be no very clear connexion between the temperature and the pulse curve.

V.—TEN CASES OF LAPAROTOMY PERFORMED IN THE ROYAL INFIRMARY, FROM MAY TO NOVEMBER 1884; WITH REMARKS.

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(*Read before the Edinburgh Obstetrical Society, 25th March* 1885.)

In presenting the following report of ten cases of laparotomy as an instalment of the work done in Ward XXVIII. during the six months from May to November 1884, I feel that I should preface it, not, perhaps, with an apology, but with a word or two of explanation. This apology or explanation has reference to the length to which the reports, with observations upon them, have attained in my hands. Even though every point not necessary to a due appreciation of the nature of the cases and the operations has, I think, been excluded, there yet remains the incontrovertible fact that the paper is rather long.

My sole reason for laying the cases in this form before you is the profound conviction that otherwise the work had better been left undone. But the Society expressed a desire to have such reports, and that of the preceding half year was received with considerable favour. In a certain number of reports of operative gynæcology there is a great want of detail in stating the difficulties encountered and the way in which these were met. The more common plan is to content one's self with a word or two of history, a statement of the diagnosis and treatment, with the results. It is perhaps vaguely stated that great difficulty was experienced in doing something that had to be done, but that the operator, after some time, triumphed over these obstructions. Now, I hold if such reports are to be useful to the Society or to the profession at large, and not merely something to excite their curiosity or astonish them, some pains must be taken to include the grounds on which the diagnosis is founded, as well as the difficulties which were met with and the methods by which these were overcome. Wearisome collocation of irrelevant facts are, however, equally to be avoided as excessive brevity. Accordingly the Fellows will notice that in this report every effort has been made to exclude data that do not bear in an important manner upon either the diagnosis or the treatment.

With these preliminary remarks I proceed to the consideration of the cases. These consist of—I. Five cases of ovariotomy. II. One case of removal of a broad ligament cyst. III. One case of removal of a sero-sanguineous cyst of the peritoneum, possibly mesenteric. IV. Three cases of removal of the uterine appendages.

I. *Laparotomy for Removal of Ovarian Tumours.*

CASE I.—Mrs D., æt. 52, residing in Selkirk, recommended by Dr Thomas, was admitted on 17th June 1884, complaining of swelling of abdomen. Patient ceased to menstruate about seven years ago. Seven months ago patient first felt a hard lump in the left iliac region, which caused her great pain. A blister removed the pain, but the swelling increased, and her doctor advised her to go to the Infirmary.

Physical Examination.—Abdomen is greatly distended with a swelling considerably greater than a full-time pregnancy. The tumour is globular in shape. When the patient is lying on her back the lower portion of the right side of her abdomen is pendulous. The tumour has a soft elastic feeling over the greater part of it, though in limited areas there is a feeling of hardness. Tumour moves slightly with deep inspiration. Fluid thrill and fluctuation distinctly felt. Dulness on percussion all over the abdomen, except in the flanks and immediately below the ensiform cartilage. Resonance in the right flank is only heard when percussed far back. Greatest girth of tumour, 2 inches below umbilicus, is 44 inches.

Treatment.—Ovariotomy was performed on 28th June. When the peritoneum was reached, it was found absolutely adherent to the tumour in front. In endeavouring to raise the peritoneum from the surface of the tumour the latter was wounded. This necessitated tapping immediately, and before the incision was completed. After running off as much as the large aspirator would draw, the latter was withdrawn, and the opening in the tumour having been secured with forceps, the adhesions were examined, and the upper edge of them ascertained. The adhesions were now peeled off the tumour in all directions as far as could be reached, and the incision enlarged so as to admit the hand into the peritoneum. It was then found that with the exception of a few inconsiderable omental adhesions the tumour was free, except at the lower anterior aspects. The remaining adhesions were now carefully separated all over the lower aspect of the tumour, nothing occurring that seemed to require tying.

The omental adhesions were tied, and sponges were now inserted round the incision and the tumour emptied as far as possible. A large semi-solid mass on the right posterior aspect of the tumour gave some trouble on account of the tenacity of its contents. The pedicle, which was a broad one, and very thick on its inner aspect was found to be connected with the right broad ligament. There was no disease of the left ovary. The pedicle was secured by three silk ligatures. Hæmorrhage from the stump was completely arrested. The abdomen was thoroughly cleansed, the pedicle dropped, and the abdominal wound brought together by deep and superficial stitches. Operation lasted 65 minutes. Tumour weighed 40 lbs. 2 oz.

Patient passed wind on the third day, bowels were moved on the sixth day, and the deep stitches were taken out on the seventh day after operation. Eight days after operation the right parotid gland became intensely swollen, and remained so for about a fortnight; otherwise the patient's recovery was uninterrupted. Discharged 9th August in good health.

There is little to remark regarding this case, except that the adhesions, which were pretty general in front, rendered the removal of the sac a matter of considerable difficulty. Those to the parietal surface of the abdomen were, though general, very little vascular and comparatively unimportant, had it not been for their position. But as they were situated in the line of the abdominal incision, they caused a considerable amount of trouble, and made the operation rather difficult until their extent and nature were defined by enlarging the incision. Those to the omentum were more serious, and required, of course, to be carefully ligatured.

Another point of more importance is the occurrence of parotitis. Considering the connexion, allowed on all hands to exist, between mumps and ovaritis in the female and orchitis in the male, it is not too much to expect that the sympathetic chain could work backwards, and that irritation of the ovarian nerves should produce inflammation of the parotid. I am inclined to this view the more that this is the second time I have met with parotitis after the operation of ovariotomy.

In neither of these cases was there temperature or other symptoms to lend the least colour to the opinion that the parotid inflammation was septic. In neither case did the glands suppurate. The parotitis merely complicated the convalescence a little by the pain and concomitant slight degree of fever it induced. The fever never ran over 101°.

On the occasion of my first case of parotitis I consulted Dr Thomas Keith as to whether his experience tended in that way. But he told me that he had only met it twice, and seeing that it had occurred only that number of times among five hundred operative cases, he was not inclined to regard the connexion as otherwise than what might be expected to happen in a similar number of serious surgical operations. He was kind enough to send me notes of one of his cases. That one, however, was doubtless a septic case, and evidently could not be used in support of any theory of reflex sympathy such as I am inclined to urge.

I am interested, however, to note in No. 47 *Centralblatt für Gynäkologie*, 1884, a case of operation, after the bursting of a cyst, by Küster, which was followed by parotitis. In this case there was, however, an abscess of the abdominal wall, which formed in the track of one of the stitches.

Altogether, I am inclined to think that the occurrence of these parotitic inflammations is worthy of being noted, as they fall in with well-known facts in connexion with reverse sympathies.

CASE II.—M. W., æt. 57, residing at Musselburgh, was admitted 3rd July 1884, complaining of a swelling in her abdomen. Patient is unmarried, and has had no children. Menopause occurred eight years ago. The swelling was first noticed two years ago, commencing in the right groin and gradually extending upwards over abdomen.

Physical Examination.—Abdomen distended to size of full-time pregnancy. Right side fully more than left. Greatest girth, at level of umbilicus, is 36 inches. Tumour has a uniformly smooth feel. Fluctuation and fluid thrill is felt freely through it. Percussion in the mesial line is absolutely dull till about 1½ inches below ensiform cartilage, where it becomes resonant. Percussion note on left side is clear along a thin line parallel to the iliac crest and Poupart's ligament till about 2½ inches from the upper edge of the symphysis pubis, where it becomes flat. Left flank resonant. Deep behind in right flank note is clear, otherwise on right side dull. Position of percussion note not appreciably altered by change in position of patient.

P.V.—Hymen persistent and tight. Uterus deeply placed in pelvis, small, and movable. Tumour can be felt occupying inlet, but no part of it is fixed in pelvis.

Treatment.—Ovariotomy was performed. Some loose adhesions over anterior surface of tumour were divided by a sweep of the hand. The tumour was attached by a thin pedicle to the right broad ligament. After being lessened by tapping, it was drawn through the opening, and the pedicle tied in a Staffordshire knot, the tumour removed with scissors, and the pedicle dropped. The abdomen was now sponged clean, and the wound brought together by seven deep and numerous superficial stitches. The operation lasted twenty-eight minutes. The tumour was connected with the right broad ligament. The left ovary was very small, but apparently healthy. Patient made an excellent recovery. Dismissed 12th August.

The above represents an easy ovariotomy operation, whose history was as uneventful and successful as we could well wish.

CASE III.—Mrs B., æt. 44, residing in Midcalder, recommended by Dr Wilson, was admitted 1st September 1884, complaining of a pain in her right side and of a swelling which occupies her abdomen. Present attack gave no trouble till last February, when patient's attention was attracted by slight uneasiness and swelling of her abdomen, both, she thought, to be due to pregnancy, in spite of the facts that menstruation was regular and the mammæ unchanged.

Physical Examination.—Greatest girth of abdomen, 39 inches. Free fluid thrill felt throughout the abdomen. Percussion dull in the flanks; a sense of increased resistance in the lower anterior part of the abdomen. The uterus was low down in the pelvis, but no definite tumour could be made out per vaginam. Sound entered 2½ inches upwards and to the left. On aspirating, the aspirator was found to enter the cavity of a large tumour, but only a drop or two of gelatinous stuff was obtained with the strongest aspiration. An attempt was made to facilitate the passing of the free fluid from the abdomen by pressing in the sides whilst the trocar was being partially withdrawn, but nothing could be obtained further. The conclusion formed was, that we had to deal with a burst ovarian cyst with very gelatinous contents.

Treatment.—The operation of ovariotomy was performed on 10th September. On opening the peritoneum a large quantity of stringy jelly-like stuff issued forth. After as much of this as possible was removed, an examination was made of the tumour, which was found to spring from the right broad ligament. The left ovary was normal. The tumour was now tapped, but scarcely anything could pass through the large aspirator. An incision was now made in the tumour, when it was found to be filled with thick gelatinous stringy stuff of great tenacity. This had to be pulled out in ropy masses, and ultimately the tumour was ligatured and removed. Extreme difficulty was experienced in cleansing the abdomen, from the adhesive gelatinous stuff with which it was filled; and after great trouble this was only imperfectly accomplished. The wound was secured in the usual fashion. A glass drainage-tube was inserted into its lower angle, but removed after four hours, and a superficial stitch passed in its place. The patient rallied well from the operation. The tumour with contents weighed 20 lbs. Patient made an uninterrupted recovery, and was dismissed on 3rd October, all evidence of abdominal fluid having disappeared.

There was a distinct rounded perforation in the upper part of the tumour, through which the gelatinous stuff had escaped into the abdomen. There was also observed a kind of roughening and thickening of the parietal peritoneum, as well as some extra reddening of the visceral peritoneum. There was also noticed a peculiar oblong thick walled cyst, about 2½ inches long by ¾ of an inch in diameter, attached by a sort of mesentery to a portion of intestine on the right side. As this structure appeared so very like a distended condition of the caput cæcum coli, it was deemed unadvisable to remove it. This case is so very like the one that follows it, that I prefer to record the latter before making my observations on some points of special interest connected with the tumours.

CASE IV.—Mrs D., æt. 58, residing in Falkirk. Admitted 9th October 1884, complaining of a swelling of the abdomen, and a tumour which protrudes through the vagina. About a year before admission the patient first noticed a swelling immediately above the pubis. This gradually became larger, and grew up the abdomen in the middle line till it reached the pit of the stomach. Lately it seems to have fallen from its greatest height. It greatly distended the abdomen, and prevented her from doing work; and for last six months she has been lying on her back a good deal. About six months ago she suffered from diarrhœa, and a swelling came down from her vagina.

Physical Examination.—Abdomen distended to the size of a full-time pregnancy. The distension is more marked to the right than towards the left. Umbilicus projects. Circumference round umbilicus is 39 inches. Feeling of surface of tumour is smooth, firmer, and more irregular on right than left. No friction to be felt or heard. Tumour movable under peritoneum. Percussion dull in mesial line to 1½ inches above umbilicus, after that clear. Some resonance in the left flank, passing up to iliac fossa, where it vanishes. Some resonance far behind in the right flank, otherwise dull. When the patient is turned on the left side, the mass sinks away to the left, and gives resonance in the right groin. Fluctuation and fluid thrill both right and left, but not from right to left. *P. V.*—Large prolapse of bowel, in shape of a vaginal rectocele. Uterus displaced upwards towards the left. Tumour does not descend into the pelvis, but can be felt with difficulty high up above the brim. Sound enters upwards and forwards 2½ inches.

Operation on 21st October. On reaching the peritoneum it was opened with ease, and a large quantity of extremely gelatinous material poured forth, of deep amber colour. After the peritoneal cavity was emptied as far as possible, the hand was passed round tumour, in which there was discovered a transverse rent slightly above the upper angle of the abdominal wound. The tumour had no adhesions, and was connected by a thin and rather short pedicle to the right broad ligament. Left ovary healthy. From the extremely fibrous nature of the contents of the tumour, it was deemed useless to aspirate. Its size was diminished by its contents being pulled forth in rope-like masses, until the tumour could be drawn through the abdominal incision. Its pedicle, which was connected with the right broad ligament, was secured in a Staffordshire knot and the tumour removed. No bleeding from the pedicle. In relation to a portion of intestine on the right side, but forming no part of it, there was a dense cyst, 3 inches long by ¾ inch in diameter. The attachments of this cyst were also ligatured, and the cyst clipped off. Its end towards the bowel seemed to be blind. The extravasated contents of the tumour were cleared out with as much thoroughness as practicable, but it was impossible to completely clear the abdominal cavity. The incision was brought together in the usual fashion, the wound dressed, and the patient put to bed.

The small tumour above described consisted of thick walls, apparently muscular, lined by a mucous membrane. It contained a clear glairy fluid. On its outer aspect there were two or three shiny cyst-like bodies. Patient recovered well from operation. She passed wind the day after. Deep stitches were removed on sixth day. Union perfect. Dismissed cured, 15th November 1884.

The above two cases present several points of special interest. It will be noticed that in both cases the cysts had ruptured without our being able to trace its occurrence to any injury. It is likewise to be observed that in both cases a peculiar ovoid intestine-looking cyst was observed. These cysts were tensely filled with fluid, and provided with thick walls, and were apparently connected directly with the intestine by a sort of mesentery. So far as I have been able to make out, the most probable explanation of them is, that they were diverticula from the small intestine, which are believed to arise in connexion with the ductus vitelli intestinalis, which unites the intestine with the umbilical vesicle in fœtal life (see Quain's *Anatomy*, seventh edition, page 841).

In dealing with the first tumour I did not care to interfere with it, as I feared it might be a dilated vermiform appendage; but as on the second occasion it did not seem to be so closely connected with the bowel I removed it, as it appeared so tense that I feared it might ultimately burst. The thickness of its walls, however, on section, indicated that that would be only a remote contingency. I have never met with them on any other occasion when operating on the abdomen. Why these two cases should have presented this peculiarity I am at a loss to understand, unless, perhaps, the escaped stringy fluid may have acted as an irritant upon them, and led to their increased growth. In favour of that idea is the fact that the wall of the one removed was undergoing a sort of gelatinous degeneration at certain points. The extreme tenacity of the contents of the tumours, and the stringy fashion in which the extravasated contents adhered to the coils of intestines, seemed to me very peculiar and unusual. It almost appeared to form a membranous meshwork round the bowels, from which at many parts it could only be removed by being peeled off.

The cases seem to be in some respect analogous to those cases described by Werth,[1] and which he will have to be allied to what Pean calls Tumeurs par Maldie Gélatineuse du Péritoine,[1] suggesting that the great French surgeon in his hurry failed to trace a connexion between the disease of the peritoneum and diseased ovaries, which he (Werth) believes must have existed; but if so, there was no further change in my cases in the peritoneum than some extra thickness, redness, and marked roughening.

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[1] "Ueber Pseudo-myxoma Peritonei," *Archiv für Gynäkologie*, Bd. xxiv. s. 103.

Professor Greenfield examined the cyst in the former of these two cases, and reported as follows:—"The portion of cyst examined was very unlike a common ovarian cyst. In the thicker and older portions the structure was dense, composed of fibrous tissue, with a very large number of yellow elastic fibres and numerous bundles of unstriped muscle cells. But for the most part the structure was very highly cellular, resembling actively growing granulation tissue, exhibiting in some parts many interlacing spindle cells, in others masses of granulation cells of various shapes. Towards the free surface, *i.e.*, the surface bounding the cyst cavity, the structure resembled that of an actively granulating wound, being composed of dense masses of cells forming irregular bands, and containing numerous large irregularly dilated capillaries filled with blood. The secondary cysts appeared to be lined only by a layer of flattened cells resembling an endothelium, and not distinguishable in character from the cell masses in which they lay. In some places two or three layers of cells were present, in others the flattened cells were absent, the cell buds growing freely into the cavity."

The pathological conditions here enunciated would seem to indicate a special activity of growth, possessing characters not usual in the life history of ovarian tumours, where the separating cells are usually of the cylindrical form. Still, the history of the cases show that whatever the changes arising exactly were, the tumours with their contents were of a benign character. From the most careful exploration after the conclusion of convalescence, no evidence of fluid of any kind could be made out in the abdomen, so that it is manifest that whatever was left was in some way absorbed, however the process was effected. I mention this fact because Werth in his paper on the subject states that he believes such cases lead to peritoneal irritation on account of the insolubility of the gelatinous material, and its consequent impossibility of being absorbed by the peritoneum.

It is idle to say that I was able to empty the peritoneum in these cases. I sponged and scooped out with the hands as much as possible; but after my best endeavour, there was a considerable amount of the extravasated cyst contents left behind in the abdomen. I introduced a drainage-tube for some time in the first case; but after thinking over the impossibility of any of this gelatinous material escaping by it, I withdrew it a few hours afterwards, in case it should lead to sepsis. I am very much averse to the use of a drainage-tube in infirmary cases. If we are careful to exclude sepsis, it seems to me that it does not matter so very much what is left inside the abdominal cavity. I am therefore careful to cleanse the abdomen from foreign fluids as completely as possible, and am equally careful when that is possible to exclude any such fluid entering the cavity. But I am most careful of all things to prevent the entrance of anything into the cavity that might excite any sepsis within it. I think also that in the Infirmary a drainage-tube has once at least led to disastrous results in my hands.

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[1] *Tumeurs de l'Abdomen et du Bassin*, Paris, 1880.

CASE V.—Mrs M., æt. 52, residing at Broxburn, was admitted on 5th September, 1884, complaining of pains and swelling in her abdomen. Patient is nulliparous, and has been ailing for about 12 months, but has got worse during the last three.

Physical Examination.—Abdomen is distended in the lower part to about the size of a six months' pregnancy. Percussion is dull in the mesial line up to the umbilicus, after that resonant. Both flanks resonant. Some tenderness on pressure complained of in the left groin, where there is also a sense of increased resistance. A feeling of increased resistance is present also over the lower part of the abdomen. No distinct fluctuation is to be felt in outline of tumour. *P.V.*—Vagina short. Vaginal portion of cervix is rounded. In front of vaginal portion, and closely connected with it, are two firm slightly tender nodules communicating the feel of a fibroid tumour. The uterus is movable. The entrance into the pelvis anteriorly is blocked by a movable soft tumour whose outline appears to be smooth, but not specially tender. Sound enters upwards and forwards 2½ inches. Measurement round the most projecting part of tumour is 33 inches.

3rd October.—Since admission patient's abdomen has been increasing in size. There is dulness in both flanks and free fluctuation, indicative of free fluid in abdomen. As this was giving rise to considerable distress to-day, as well as with a view to establishing diagnosis, the patient was aspirated. A large quantity of thin, deeply straw-coloured fluid was withdrawn from the abdominal cavity, care being taken to push the fluid in the direction of the aspirator by lateral pressure in the loins. The trocar was now reintroduced into the canula, and what appeared to be a thin-walled cyst penetrated. From this a quantity of similar fluid was obtained. The fluid examined microscopically was found to be composed of blood cells mingled with groups of large rounded multinucleated sprouting cells arranged in masses. Sp. gr. = 1026. It gave a dense deposit with heat and nitric acid. Reaction alkaline. Diagnosis formed was ascites, with ovarian sarcoma. This diagnosis was also arrived at by Dr Foulis on examination of the fluid only, without knowing anything of the patient. As it was uncertain whether these malignant cell groups were derived from the peritoneum or from a cyst inside the ovary, it was resolved to operate so as to give the patient a chance.

The operation was performed on 8th October. On reaching the peritoneum a large quantity of straw-coloured fluid escaped. It was now found that the tumour, which was chiefly solid, was connected with the right broad ligament by a very broad attachment, which, however, presented enough of a sulcus to enable a ligature to be passed close to the uterus. This was effected, and the base secured in the grasp of a Staffordshire knot. The tumour was now cut away as close to the ligature as was deemed advisable and the cut surface examined. At this stage it was found that a portion of the surface of the pedicle bled rather freely. The pedicle was now grasped afresh and transfixed with a blunt pointed needle carrying a double thread, and again tied beyond the first ligature. This produced complete arrest of hæmorrhage. The abdomen was mopped dry, and the pedicle dropped after cutting the ligatures short. It was found that on the left side of the uterus, and occupying the situation of the broad ligament and rising above the fundus slightly, there was an elastic semi-solid mass, apparently being made up of the broad ligament and ovary infiltrated with sarcomatous matter. It was deemed prudent to leave the left broad ligament alone. The abdomen was cleaned, and the wound brought together in the usual manner. The solid part of the tumour removed was found to weigh 2 lbs. The fluid evacuated (being both ascitic and fluid from the tumour) measured 7 pints. Deep stitches were removed on the sixth day after operation; wound perfectly healed. Sometimes she passed her urine involuntarily and suffered occasionally from pain, but otherwise she felt well, though weak, and was discharged 30th October 1884.

This case is of considerable interest in regard to the question of diagnosis and the relation of ovarian fluid thereto. Combining clinical and microscopic examination we had no difficulty in arriving at a true conclusion regarding the nature of this tumour. In opposition to the observations of Garrigues we found in the fluid aspirated from this cyst undoubted evidence of malignancy in the groups of large sized many nucleated sprouting cells, as described by Foulis. But apart from any clinical knowledge of the case, Dr Foulis was able to arrive at the true nature of it by examination of the fluid only.

Anxious to do the best for my patient after fully explaining both to her and her husband my fears as to the ultimate result, I gave her the chance of benefit by operation, hoping that I might possibly be able to remove the tumour entirely, and that it might not have infected the peritoneum. But the result proved unsatisfactory, as the sarcoma had, before the operation, infiltrated the other broad ligament, though it had not apparently infected the peritoneum. Such a case, if operated upon early and completely removed, gives good reason for a favourable prognosis when the cysts have not burst through the cyst wall into the peritoneum previously to operation. But if it is impossible, as in this case, to remove all the sarcoma, or if the peritoneum is infected previously to the operation, return of the disease before many months is nearly certain.

Professor Greenfield was good enough to examine this tumour also, and reports as follows:—"The tumour resembles in essential structure an ordinary ovarian cyst, but the stroma is in parts very highly cellular, resembling spindle-celled sarcoma in structure, and the vessels are unusually numerous and large. In some parts hæmorrhage has occurred into the substance of the tumour, producing a cavernous structure traversed by the cell network of the sarcoma-like tissue. The epithelium lining the cysts is very regular in structure and arrangement."

(To be continued.)

VI.—ON THE OPERATION OF SHORTENING THE ROUND LIGAMENTS.

By Wm. Alexander, M.D., F.R.C.S., Visiting Surgeon to the Liverpool Workhouse Hospital.

Dr Francis Imlach, of Liverpool, reports in the April number of this *Journal* his experience of the operation of shortening the round ligaments for uterine displacements. He has operated on 36 cases, a sufficient number to give his opinions and statements some value, and to cause them to be acted on by would-be or inexperienced operators.

The present time is a most critical one in the history of this operation. Not only has the attention of the profession become more and more directed to it, but news of it has passed the barrier that separates the events of the medical world from the public. Ladies even have heard of it *before* their medical attendants, and have asked them whether it would not be better to have it performed than to continue for ever the use of pessaries.

This being so, it is essential that those who have experience of this operation should state that experience clearly and according to sober fact, leaving aside eulogistic language regarding ease of performance and rapid curative effects, until time shall have thoroughly justified such eulogies.

It is only because the profession may be unintentionally misled by Dr Imlach's paper that I feel justified in criticising some of his statements here. My position in regard to the introduction of the operation is a sufficient reason why I should do so. I do this in the most friendly manner possible, and sincerely regret that the necessity for correcting that paper is so unmistakable.

In the first place, Dr Imlach says,—"There is no need to make an incision an inch and a half or two inches long." "An incision half an inch in length, made from the spine outwards," is, according to him, quite sufficient. Now, most surgeons will agree with me that half an inch more or less in the extent of the primary incision is a matter of very minor importance, unless the distance merges into one or other extreme. Half an inch is really an extreme so great as to render the operation in most cases impossible. A scalpel is very nearly half an inch broad, and a half-inch incision just makes a round aperture one-third of an inch in diameter. In the region in question, a considerable amount of fat has to be gone through before the ligament is reached, and thus Dr Imlach's incision is really converted into a deep punctured wound, at the bottom of which the round ligament lies. This structure may be seized, according to Dr Imlach, with "the fingers or forceps!" It may be *possible* to *see* the ligament at the bottom of such a wound, but *to seize it with the fingers is absolutely impossible.* Again, in finally closing the puncture, one or at most "two sutures" are directed to be used. Why should two sutures ever be used in such a wound? From such inconsistent directions as these it is doubtful whether Dr Imlach himself ever performed the operation with half an inch of an incision. I therefore warn would-be operators not to follow Dr Imlach's advice in this direction. Take sufficient room the first time, and afterwards you can limit your incisions as your experience dictates.

Two anatomical mistakes only require to be mentioned to prevent operators being confused. The first is a very serious one, and lies in the sentence,—"There should be no groping for the round ligament until the pillars of the inguinal ring have been identified in the conjoined tendon." This is an anatomical puzzle. What is anatomically known as the "conjoined tendon" cannot be referred to here, as the operator has nothing whatever to do with that structure, and it would be a very great mistake if the ligament were not to be groped for till this structure was reached. I am afraid the surgeon would never reach the round ligament if he literally followed these directions. The second anatomical mistake consists in the description of a space as existing between the external pillar of the ring and Poupart's ligament, which space might be mistaken for the external abdominal ring. It is only necessary to remind readers that Poupart's ligament itself forms the external pillar of the ring, and that the position of the space, as described, is an impossible one. This mistake is, however, only amusing. The space really exists, but is below Poupart's ligament.

"Each ligament is then attached to either of the pillars, or to both, by a single ligature of finest silk or chromic catgut; the slack is cut away." "It is a mistake to use numerous coarse ligatures, for it is not intended that the uterus shall be permanently slung on catgut," etc.

I always recommend that the ligaments be fastened to both pillars of the ring, and that the slack, if not frayed, be stitched into the wound, and in every case, only the frayed end should be cut away. Although it is not intended that the uterus be permanently slung on catgut, it is intended that the ligaments should adhere as firmly as possible to the structures around and within the pillars of the external abdominal ring. The principle of the operation is so sound that even slight adhesions of the ligaments will keep the uterus in position indefinitely, but such slight adhesions are liable to yield in the day of trouble, and it is accidental strains that are to be guarded against, and that try the strength of adhesions. Now, Dr Imlach does not afford us any reliable information in his reports of cases as to the time when the patients were last seen, etc., and we can only hope that the effects of his operation will endure. I do not think it likely that many of them will be really permanent, because his descriptions of primary union in nearly every case can only apply to the skin. The round ligaments and the pillars of the ring are very dissimilar structures, and when laid side by side, as Dr Imlach lays them, without any irritation, the probabilities of permanent firm adhesion between them is very slight indeed. The adhesions of the slack of the ligament to the sides of the wound he prevents by cutting off the slack. Everything is sacrificed to getting the patients out of bed in a fortnight. Now, I never operate on a case that will not be able and willing to stay in bed for at least three weeks, and I have been rewarded by never meeting with a single failure of the ligaments to hold up to the present time. I saw to-day (13th April) a case of prolapse that had been operated on by me on 2nd May 1883. The uterus is still in the same position in which it was placed at the time of operation.

The most troublesome displacement capable of rectification by the round ligament operation is a confirmed and chronic retroflexion. Even this is treated in the usual light and airy fashion. In such cases Dr Imlach recommends the insertion of an intrauterine stem for *a few days*. This is the purest nonsense. He evidently has had no retroflexions of a very troublesome kind to deal with, or he would have recommended the keeping in of the intrauterine stem for a few weeks or a few months until the uterus has lost its power of recoiling. One of my cases recoiled after the lapse of three weeks, and was cured by the reinsertion of the stem for another month. Another case recoiled after a month, and was cured by the stem being retained another month. I spoiled a case completely by taking out the stem too soon, and failing to reinsert it, as I did not then fully understand such cases.

Two of Dr Imlach's cases have had hernia since operation. For this reason only, if for no other, the canal should be closed as completely as possible by the operator. By stitching the pillars together, as I have always recommended, the tendency to hernia is prevented. There is no need to use coarse sutures. In the beginning of the operation, having to feel my way alone, I used different strengths and kinds of suture. Finding as I went on that the ligaments had not much tendency to retract except when straining took place, I gradually lessened the strength of the sutures. This should never make operators forget that thorough adhesion of the ligaments to their periphery is the object to be attained; and all surgeons will agree with me that this is not likely to be satisfactorily attained by the method recommended by Dr Imlach.

I am sorry that he has forced me to write this criticism of his paper, but really the statements he has made are so misleading that in the interests of the profession they required to be corrected.

Dr Imlach's article seems fitted for a popular paper, whereby ladies might be induced to submit to operation. Everything is minimized beyond discretion or probability. Hardly any incision, immediate union, allowed up in fortnight, never any more pessaries, etc. For a nervous lady about to undergo the operation it may be justifiable to minimize matters, but for a guide to medical men, and in a paper appearing in the pages of a sober medical journal, such loose statements are out of place, and deserve to be very strongly condemned, especially when written about an operation of which most medical men have not yet had any personal experience, and consequently cannot take such statements as they require to be taken—*cum grano salis.*

Part Second.

REVIEWS.

On Renal and Urinary Affections. By W. HOWSHIP DICKINSON, M.D. Cantab., F.R.C.P. In Three Parts. Part III. Miscellaneous Affections of the Kidneys and Urine. London: Longmans, Green, & Co.: 1885.

THIS is the concluding volume of Dr Dickinson's work on renal and urinary diseases, the first part of which appeared about fourteen years ago. Such a gap is an undoubted disadvantage to the work regarded as a whole, but there is no essential unity in it; and considering the magnitude of the subject, we are very glad that Dr Dickinson gave himself the time to write deliberately, as he has thereby been enabled to give the fruits of many years' careful study of the less known departments of urinary diseases.

The text is enriched by numerous cases, which add to the bulk of the book, but could have been ill-spared. The subjects dealt with are surgical kidney, pyelitis, renal calculus, new growths, hydronephrosis, parasites, hæmoglobinuria, hæmaturia, and albuminuria. By the way, the last is rather inconsistent with the title of Part I., which it may be remembered was called "Albuminuria," as a synonym for Bright's disease; the addition of this chapter on albuminuria as a symptom at the end of the book indicates to some extent the change of opinion that has come about in the last fifteen years. One of the best chapters is that on Paroxysmal Hæmoglobinuria; it contains a large amount of information, and the author's own cases are very interesting. Dr Dickinson does not seem to have very much capacity for investigation. For example, he says that there is a brown glistening deposit in the urine of these cases of hæmoglobinuria which he thinks is composed of blood-colouring matter, but which does not dissolve in acetic acid, and does dissolve with liq. potassæ. Yet he carries his investigations no further, though most persons would consider that these chemical reactions are not in favour of these granules being, as Dr Dickinson says they are, granules of blood pigment.

The chapter on Chyluria contains some interesting cases; notably one which terminated by a spontaneous cure, and another in which intra-vesical injections of perchloride of iron had a decidedly good effect. The chapter on Albuminuria is sensible, and we are glad to see that Dr Dickinson opposes the routine employment of the tests which have been recently recommended for bedside use. He shows that potassio-mercuric iodide detected albumen in the urines of one hundred persons seen consecutively in hospital and private practice, though by heat and nitric acid he was able to detect it in thirty-nine only.

The account of renal lithiasis is very full, and is brought well up to date. We should like to know what Dr Dickinson precisely means by "symptoms of uræmia" in calculous obstruction? Before all, under the group of symptoms which we call uræmia, convulsive phenomena are the most prominent, yet with the exception of muscular twitchings, which occur as a rule only late in this condition, they are conspicuously absent. We do not deny that some of the symptoms, for example the dyspnœa, may be uræmic, but we want greater precision in the use of such expressions as uræmia, and writers who are leaders and teachers of the profession are not to be excused for using words vaguely or incorrectly.

The work is abundantly illustrated by woodcuts, most of them good, but not all. The cut on p. 846 is most singular if it is meant to represent a section of kidney tissue. The tubules look as if they were injected with wax, and, so far from affording evidence of the truth of the description in the text, incline us to believe that Dr Dickinson's methods have failed him.

In describing the surgical kidney he speaks of the radiating whitish streaks as being due to tubules filled with pus, but Dr Steven has lately asserted that they are the pus-infiltrated lymphatic spaces between the tubules, a statement which Dr Dickinson does not refer to. He speaks of "regurgitation" of urine into the tubules in surgical kidney—a process which is hardly conceivable under any circumstances. His notions of the mode in which the kidney becomes secondarily involved seem to be very vague. He agrees with those surgeons who dispute the view that "catheter fever" can be fatal without definite changes in the kidneys, hinting that microscopical examination might have revealed changes in the cases quoted by Sir Andrew Clark. This might have been so, but *a priori*, it is quite conceivable that changes in the bladder may be *per se* sufficient. Senator has published three examples of death with symptoms resembling Kussmaul's coma in cases of cystitis, where apparently some poisonous material was formed by fermentative decomposition in the bladder, and absorbed into the blood.

Dr Dickinson's style is easy and good; the book on the whole is an excellent one, and constitutes by no means the least valuable although the last part of his contribution to renal pathology.

Beiträge zur pathologischen Anatomie und Physiologie. Herausgegeben von Dr ERNST ZIEGLER, Professor der algemeinen Pathologie und der pathologischen Anatomie an der Universität Tübingen, in Verbindung mit Dr C. NAUWERCK, Assistent am pathologischen Institute der Universität Tübingen. Erstes Heft.

Contributions to Pathological Anatomy and Physiology. Edited by Dr ERNEST ZIEGLER, Professor of General Pathology and Morbid Anatomy in the University of Tübingen, in association with Dr C. NAUWERCK, Assistant in the Pathological Institute of the University of Tübingen. Part I. Jena: Gustav Fischer: 1884.

ZIEGLER is now so well known, not only in Germany, but in our own country, that any work appearing with his sanction will be cordially received. These contributions, edited by him with the aid of his assistant, promise to be extremely valuable so far as we can judge from the first part, which is not only of great interest on account of the intrinsic value of its original papers (some of which will be noticed in the Periscope of Medicine), but is also pleasant to the eye from its excellent type and beautiful illustrations. It contains a paper by Nauwerck on Bright's Disease, in which he discusses the pathogenesis of renal disease; Bright's disease in croupous pneumonia; acute glomerulo-nephritis; and nephritis in opium poisoning. Krafft has a contribution to our knowledge of the histogenesis of periosteal callus, Hückel a paper on the Biology of *Mucor corymbifer*, and Mögling the first part of an elaborate monograph on Hæmorrhagic Infarct, which is devoted to an historical retrospect.

Syllabus of a Course of Lectures on Physiology, delivered at Guy's Hospital. By H. PYE SMITH, B.A., M.D., F.R.C.P. London: J. & A. Churchill.

We have here embodied the outlines of the course of lectures given by the author year by year at Guy's Hospital, to which is added an appendix, the latter containing a good deal of information in a tabular form.

This little work we can readily suppose may be of use to the student, who, by glancing over the pages, may discover from the various headings the points of the subject in which his knowledge is deficient, and so enable him to refer without loss of time to the exact parts in the different text-books for the information desired; but it is, we are glad to say, of no use for "cramming."

The book is indicative of a full and practical course of lectures, and its pages are interspersed with original diagrams, some speaking for themselves, others requiring some little study and reflection to quite understand them.

To any one arranging a course of lectures on physiology the syllabus would be of use.

Lectures on Acne, Acne Rosacea, Lichen, and Prurigo. By TOM ROBINSON, M.D., Physician to St John's Hospital for Skin Diseases. London: H. Kimpton: 1884.

IT appears from the preface, which in this instance we have read, that some of those who heard these lectures delivered requested the author to publish them. It may be doubted if he was wise in yielding so readily to their wish, as a tolerably careful perusal has not disclosed any *raison d'etre* for the book. Not only does it contain nothing new, but much that it does contain might be objected to on the score of irrelevancy and want of method. Dr Robinson seems to have had some idea of this himself, for at p. 103, speaking of prurigo, he says,—"I had some misgivings when I commenced this paper about the possibility of arranging the matter which was floating about in my brain in a form which would convey to others any precise opinions on irritable skins. . . . This misgiving is intensified by a perusal of what I have written." The following paragraph from the lecture on acne may give an example of the style:—"I look upon acne as a disease which is due to activity in the life of a hair and sebaceous follicle, which activity in the form of the disease which we are considering to-night occurs at the age of puberty and in women at the mesopause (*sic*), that the activity is due to the evolution of hair." We cannot conscientiously recommend the volume either to the student or the practitioner.

Notes on Materia Medica and Pharmacy. By FREDERICK T. ROBERTS, M.D., B.Sc., F.R.C.P., Professor of Therapeutics at University College, etc. London: H. K. Lewis: 1884.

THESE *Notes* are compiled with much care, and will be of great use to students in studying pharmacy and the articles of the materia medica.

The classification in many parts is defective, and in not a few cases far too complex; as, for example, under *Roots* he classifies horse-radish root under "entire top-shaped roots," which is very far from being correct. The statement that horse-radish is "liable to be mistaken for aconite" is one which must be taken with great caution; the fact being that the roots are so very unlike that no student of medicine ever mistakes the one for the other in his professional examinations.

It would be better to place pomegranate root *bark* under *Barks* than under *Roots*, as is done by Professor Roberts.

We could point to several other examples of similar mistakes, but notwithstanding these defects it will prove a book of much use to students.

Electricity and its Manner of Working in the Treatment of Disease: A Thesis for the M.D. Degree of the University of Cambridge. By W. E. STEAVENSON, M.D., M.R.C.P., etc. London: J. & A. Churchill.

THE author here presents us with his thesis, as also with the *Latin Inaugural Medical Dissertation on Electricity*, written by an ancestor, Dr Robt. Steavenson of Berwick on Tweed, on his taking his degree at Edinburgh University in 1778, and a translation of the same.

Dr Steavenson's endeavour is to prove absolutely that electrical conditions of the atmosphere do influence health, and that in the form of negative electricity, which, if really the case, would, he believes, lead to the reintroduction of statical electricity, which has fallen into disuse since the discovery of galvanism and faradism as a means of treatment, as also the addition of the electroscope to the armamentarium of the medical man as an aid to diagnosis. Proof of this is, however, not quite attained, although the author is evidently assured of the facts in his own mind. The papers are worthy of perusal by those interested in the subject.

Photo-Micrography. By A. COWLEY MALLEY, B.A., M.B., etc. Second Edition. London: H. K. Lewis.

THE reprint of this small work is of special interest at present, the subject treated of occupying the attention of not a few microscopists in this country and in America.

After a chapter devoted to the optical properties of lenses, which might have been left out, the author fully describes how illumination is best to be obtained for photo-micrographic purposes, and explains how one with a good practical mechanical turn can make for himself a heliostat, should the amount of sunshine, and the number of days on which it is available for this purpose, allow of the use of the instrument with sufficient frequency to counterbalance its cost, or the trouble of making one.

The camera is considered, and a chapter is devoted to the preparing and mounting of objects, naturally with especial reference to the subject in hand, as microscopic preparations mounted by every method will not do for being, at least, readily photographed. Two photographic processes are fully described—the wet collodion, which is the best, and the dry plate process, which, although not perhaps so good as the former, is much more easily managed, and does sufficiently well for most purposes.

The author understands his subject, and writes in a most practical and readily comprehended manner; and to any one desirous of working in this direction, the book can be recommended. We need only remind the reader how, by the use of photo-micrography, plates of a suitable size may be obtained, which, by means of the magic lantern, can be made use of by the teacher of histology, pathology, etc., and by this means minute structures may be readily exhibited on the screen to a large class at once, thus saving much time and trouble in explaining the same thing to individual members of an audience. Several very admirable examples of photo-micrography are interspersed throughout the work.

The Microtomist's Vade-Mecum. By ARTHUR BOLLES LEE. London: J. & A. Churchill.

THIS is a handbook giving an account of the various methods of preparing animal tissues for microscopic examination. It is divided into two parts: one, in which we have a collection of some 500 formulæ for the general treatment of these tissues; and second, a description of special methods of preparing the same structures and various organs throughout the animal kingdom for observation.

The book is a perfect mine of information, and is, as far as we can see, exhaustive of the subject treated of,—instruction as to methods being here brought together from all sources.

The author intends his work perhaps more for the zoologist and comparative anatomist than for the pathologist; in fact, when treating of microtomes, he indicates how, in his opinion, the freezing process is of the least use to the zoologist, stating, "he is not writing for pathologists or for dilletante." All the same, we think the work should be not far distant from the hand of the microscopist working at any department of the subject.

The work as a whole is excellent, although not a few of the processes or formulæ are more or less obsolete. There is information in it for all, and we would particularly note the chapters on fixing agents, on staining processes, and embedding materials, as deserving especial attention.

Quasi Cursores: Portraits of the High Officers and Professors of the University of Edinburgh at its Tercentenary Festival. Drawn and Etched by WILLIAM HOLE, A.R.S.A. Edinburgh: Printed at the University Press by T. & A. Constable: 1884.

THIS magnificent volume is an admirable memorial of the University Tercentenary, providing as it does for all time coming a record of the appearance and habits of the men who at that period constituted the teaching and governing body of the University.

From the Chancellor, Rector, and Principal down, or rather up, to the Beadle, for in stature he excels them all, no one is forgotten; and a page entitled *Umbræ quædam* gives the gracious remembrance of a few of the great ones, who in this century helped to make the University what it now is.

The portraits are most of them excellent, and all have the artistic merit of variety and character—of course they vary in value and ability. Among the lay professors, Masson and Geikie are perhaps the best. In our own profession nearly all are good, though some have been sadly toned down since the first sketches from life. The Professor of Chemistry is placidly regarding a row of faces, expressive of their united opinion, that the result of an experiment is as unpleasant to their olfactory nerves as it was unexpected by the operator. Professor Turner is rejoicing over a skull. The Professor of Physiology is seen seated watching a frog, who looks as if he knows what is coming, and in a second sketch he is seen walking with a characteristic easy grace. Were it not for his stethoscope, the Professor of Practice of Physic might be mistaken for a lord mayor or a beadle. All are unmistakable likenesses, and are not flattered above what is usual.

We must not omit to notice the biographical sketches. These vary much in value. Some, like that of Professors Butcher, Macpherson, Turner, and Rutherford, are really well done little notices in good style and taste, evidently written by friends who knew the subjects. Most of the other medical professors are well and briefly done; all seem to be accurate and fairly appreciative, but two or three of them present the oddest jumble, evidently cooked like hurried obituary notices in a provincial newspaper, containing autobiographical details as to success in practice, subscriptions to charities, and also adulatory remarks hardly suitable or agreeable while the victim is alive. However, these are but trifling blemishes, and will amuse. The book is of value, which will increase every year, as the numbers are limited. How we would have valued one like this but twenty-five years old.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIV.—MEETING VI.

Wednesday, 1st April 1885.—Dr LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF HONORARY MEMBER.

Charles West, Esq., M.D., F.R.C.P., London, was elected an Honorary Member of the Society on the nomination of the President and Council.

II. EXHIBITION OF PATIENTS.

1. *Mr Joseph Bell* showed—(*a.*) A female patient on whom he had operated for a FATTY AND FIBRO-CELLULAR TUMOUR[1] on 3rd Dec. 1884. The tumour itself had been exhibited to the Society on the evening of the day on which it was removed. It had involved the right parotid gland, and projected into the pharynx. She had made an excellent recovery, both the tracheotomy wound and the incision for the removal of the tumour having healed well and rapidly. The tracheotomy had been rendered difficult because of the presence of a cystic goitre. The scar was, however, a very slight one, and the pharynx now presented no appearance of having been occupied by the tumour. (*b.*) A young man whose right OS CALCIS he had removed sub-periosteally some three years before. The whole of the bone along with a small portion of the astragalus had been taken away, but the reproduction of it had been thorough, and the patient himself had volunteered the statement that his right foot was now the stronger of the two.

2. *Dr Allan Jamieson* showed a young woman suffering from BELL'S PARALYSIS, which he believed to be due to a cause frequently mentioned in books, but not commonly met with, viz., syphilis, and most probably syphilis inherited. He based his belief on the grounds,—first, that her mother had one previous child who died in infancy; second, that the girl herself had had ulcers about the angles of the mouth, the scars of which could be plainly seen; and, thirdly, that she had suffered from double keratitis, for which

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[1] See *Journal* for Jan. 1885, p. 652.

a double iridectomy had been performed three years ago by Dr Reid of Glasgow. It was an ascertained fact that keratitis did not occur in association with acquired but with hereditary disease. She was first seen on the 20th of March last, the paralysis having existed for nearly one month. She was at once put on mercurial treatment, and the paralysis was disappearing. On turning up some of the authorities he found they only mentioned syphilis without discriminating between the hereditary and acquired forms. Curiously he had another case of this nature due to acquired syphilis at the time this patient came under notice.

3. *Mr A. G. Miller* showed—(*a.*) A case of MULTIPLE INJURIES, including fracture of the neck of the scapula, caused by a railway accident. The patient, a young man, was shunting some waggons on 22nd Nov. 1884, when he was knocked down against the rails. On admission at the Infirmary he was found to have—(1), a triangularly shaped wound over the right eye, raising a flap which was but slightly attached by its outer angle; (2), a cut behind the angle of the mouth on the left side; (3), a cut behind the left mastoid process about 3½ inches in length; (4), the nose dislocated; (5), dislocation and bruise of the right shoulder; (6), fracture of the femur at the junction of the middle and lower thirds. The extravasation of blood accompanying the fracture of the femur was so great that extension without splints was applied. The bone united, however, in first-rate position, and the patient was already able to walk with but a slight limp. The dislocation of the shoulder was reduced by the house-surgeon, but there being still deformity Mr Chiene was asked to see the case in the absence of Mr Miller. He considered that the dislocation had probably been complicated by fracture of the neck of the scapula. The patient suffered so much pain when any attempt was made to bandage his arm that he was allowed to lie in bed with it unbandaged. On 30th Jan. an examination of the shoulder was made. There was flattening in the deltoid region. The acromion process appeared as the most prominent point in the shoulder. There was flattening in the subspinous region, as also a hollow between the head of the humerus and the acromion process. The head of the bone lay slightly forwards from its normal position. At times distinct crepitus could be felt. Later it was noted that when the arm was supported at the elbow there was an interval of an inch between the coracoid process and the clavicle, but when unsupported the difference between those points was 1¼ inches. From acromion to olecranon the right arm measured 15¼ inches, the left 14¾ inches. The head of the bone still lay downwards and forwards. It was nearly in the position of a sub-coracoid dislocation, but in proof that there was no such dislocation he could touch his opposite shoulder quite easily, put his arm behind his back, and touch the back of his head. The crepitus which was

present pointed to fracture. The question was what part of the scapula had given way—the glenoid alone, or the glenoid plus the coracoid process? If the latter, the coracoid ligament must also have given way. The movement of the coracoid showed that the ligaments must have given way or been much stretched. The coracoid moved with the head of the humerus. He considered that the fracture included the coracoid process, and that fibrous, not osseous, union had taken place. (*b.*) A case of EXCISION OF BOTH TESTICLES. Sixteen months previously the patient had been struck by a stone on the lower part of the abdomen and scrotum. He was admitted to Mr Miller's Wards in October 1884, when, in addition to scrofulous disease of the testicles, he was found to be suffering from phthisis. Dr Wyllie examined him and found dulness of both apices extending to the third rib on the right side and the second on the left. The breath sounds above the clavicle were harsh and vesicular on both sides. On the left several moist sounds were heard. At the end of October patient went to Berwick-on-Tweed. He was re-admitted on 31st December. On 23rd January both testicles were removed by means of V-shaped incisions, which included a considerable portion of the skin of the scrotum. At the same time a radical cure of a right hernia was made. He had previously worn a truss, but it had caused him so much pain in his spermatic cord that he was obliged to do without it. The wounds healed with the formation of scarcely a drop of pus. Since the operation the condition of the chest had greatly improved, the moist sounds and dulness having disappeared. His voice had also gone up several notes.

III. EXHIBITION OF DRAWINGS AND PATHOLOGICAL SPECIMENS.

1. *Mr A. G. Miller* showed two drawings from a work by Dr Brossard of Lyons demonstrating THE POSITION OF THE HAND IN FRACTURE OF THE LOWER END OF THE RADIUS. Dr Brossard had made some experiments on the position of the hand in certain cases of fracture of the ulna. These two sections struck Mr Miller as demonstrating very forcibly the mechanism of fracture of the lower end of the radius. The first showed the bones of the carpus in the position in which fracture usually took place, the arm pronated, the hand dorsi-flexed and turned towards the radial side, which is the position a person places his hand in when falling forwards or backwards. The close approximation of the scaphoid and semi-lunar bones to the radius showed how the force of a fall on the hand is directly applied to the lower end of the radius.

2. *Mr Joseph Bell* showed—(*a.*) An EXOSTOSIS OF THE LOWER END OF THE FEMUR, which grew upwards and backwards in the line of the adductor tendon. It had a long neck, only a small part of which was free from cartilage. (*b.*) BILIARY CALCULI removed from the gall bladder of a heavy, fat woman, weighing about 17 stones.

She had a sinus in the middle line two or three inches above the umbilicus, with a small discharge of sanious pus. The history of the case shortly was that an umbilical hernia had formed eleven years before. Fifteen months ago she had an attack of "inflammation of the bowels." Four weeks later, while she was still confined to bed, a small swelling formed in the position of the sinus. This enlarged in about a week to the size of an orange. It went down under poultices, but never entirely disappeared. In June of last year, after severe exertion, the swelling became painful and increased in size. In August it burst of itself, and what she described as ordinary matter came out of it. Since then some small round whitish bodies have been discharged from it. These crumbled like dry mortar between the fingers. After admission to the Infirmary a probe passed along the sinus showed the presence of a hard rough body. This was cut down upon, and several fragments of gall stones and two unbroken ones were removed.

3. *The President* showed—(*a.*) THE TONGUE AND AIR-PASSAGES of a young man who had been suffocated during a fire. On opening the body it was clear that he had suffered from carbonic acid and carbonic oxide poisoning. The air-passages were dotted all over with the black matter he had inhaled, and there was also the intense injection to which attention had first been drawn by Caspar. The blood showed the signs of carbonic oxide poisoning. It had been asserted that he was under the influence of alcohol, but the examination of the stomach failed to bear out this statement. (*b.*) The parts from a case of SUICIDAL WOUND OF THE NECK. The suicide was a man over 60 years of age, and the weapon was an ordinary table-knife. He had first of all wounded the crico-thyroid membrane, and then cut into the thyroid cartilage. Had he not been seen to inflict the injuries himself, their position might have led to some suspicion, self-inflicted injuries being usually much higher up.

IV. ORIGINAL COMMUNICATIONS.

Dr Milne Murray read his paper ON THE CESSATION OF RESPIRATION UNDER CHLOROFORM, AND ITS RESTORATION BY A NEW METHOD, which will appear in a future number of this Journal.

Dr Smith said he had much pleasure in complying with the President's request that he should open the discussion, although he felt less competent to deal with the novel and deep questions involved in the able paper just read than some of the physiologists whom he saw present. He would have felt more at home had the discussion promised to be of a more practical nature, and dealing more with anæsthetics in a surgical than in a physiological point of view. What had been stated in the communication, to which they had listened with so much interest, was of great importance, but would require much time and careful consideration before justice could be done to it in a discussion of this kind. From the respiratory tracings shown, it appeared to him that towards the close of the protracted exhibition of chloroform, in the experiments cited, something occurred to produce the irregular and feeble markings at that time, which was analogous to the conditions resulting when all *sensory* nervous action, as conveying stimulation to respiratory action, was destroyed, but where in such cases there still continued an irregular and shallow respiration, possibly due to the circulation of unoxygenated blood through the inspiratory centres, and of blood loaded with carbonic acid through the expiratory centres on the sides of the medulla. With regard to death from the arrest of respiration in the human subject, although he did not in the least doubt that such an effect was producible where chloroform was pushed to the extent to which it was carried in the experiments detailed, he suspected that a number of the deaths recorded as due to chloroform in surgical operations might be attributed to other causes. He remembered cases of death on the operating table being of not uncommon occurrence before the introduction of chloroform at all, and he thought the President himself would bear out this statement. The number of deaths from surgical operations largely and suddenly diminished on the introduction of chloroform, as was shown by Simpson's remarks on Dr Philip's statements in the *Medical Gazette* for 1844 or 45, as well as in a number of able and exhaustive arguments to the same effect. Death in such experiments as those described might be said to be from *poisoning* by chloroform pushed to its fatal toxic power. But the cases of death *under*, though perhaps not *owing* to its influence in the human subject, were of a somewhat different nature. Had this agent been of so deadly a description as it was sometimes tried to be made out to be, it would have increased the mortality after surgical operations instead of reducing it, as it had done, to half what it had formerly been. Dr Smith adduced a number of cases where, had chloroform been administered, death would infallibly have been attributed to its influence. He thought that the paper read was interesting and important in its bearing upon what may possibly be the action of various substances upon the peripheric terminations of the vagus, both as affecting the lungs and heart, and the dissimilar results which might thus be produced on the circulation in the one case and the respiration in the other, was a consideration which would be of not a little practical value.

Mr Joseph Bell would not think of venturing to discuss the physiological side of the paper without having first made a careful perusal of it, and perhaps not even then. One practical point he, however, thought worthy of mention, and that was, that the administrator of chloroform should see that the patient was not allowed to over-chloroform himself. This frequently happened in cases where the anæsthetic was not inhaled with regularity, but with considerable effort at first, and was a cause of very great danger. The perflation idea was an admirable one. One point at least would be attained by it. The glottis would be kept open. Only the other day he had almost had a death from this cause, the glottis being allowed to close and the epiglottis to fall back during the administration of chloroform. When the glottis was opened, the patient respired naturally.

Dr James said it was usually a matter of regret that lateness of the hour prevented the proper discussion of many of the papers brought before them. In this instance there was less cause for it, inasmuch as the paper was one that required digestion before anything in the way of criticism was said regarding it; but as Dr Murray had devoted so much care and trouble to it, he was entitled to any remarks that members could give on points that had struck them. One point had struck him on which he would like to get a little more information. Dr Murray had referred to instances in which the chest walls appeared to heave, but in which the water-manometer recorded no ingress or egress of the air, showing that though the chest-walls were moving, the lungs were not being filled with air. He thought this was due to the disturbance of the innervation of the parts. It was what they sometimes met with in auscultating. They asked a patient to take a long breath. He immediately made a great inspiratory movement, but no air entered the chest. Any one could bring about this condition in himself if he attempted to take a full inspiration and at the same time contracted his abdominal muscles. He thought it was probable that the abdominal muscles were made to contract during the administration of chloroform, so that the abdominal viscera filled up the space which should be occupied by the air. The jerking respiration associated with loss of blood might be explained in a similar way. In auscultating one got frequent examples of jerking respiration, and the causes for this were very various. Catarrh of the apex was one. The changes in the size of the lungs brought about by the action of the heart was another. There were other causes; but this interference with the innervation of the part, if it did not explain all Dr Murray's cases, was nevertheless one which should not be lost sight of. As regards the treatment, there was no doubt that from a physiological point of view the method indicated by Dr Murray was correct. Chloroform had got into the blood, and it was important to get it out. Drawing it out by aspiration was the best way. Aspiration would not only empty the air-cells of the air charged with chloroform, but might even draw the chloroform out of the blood. It struck him, however, that in cessation of respiration from other causes another mode of treatment must be employed. There is not something in the blood that should be out, but something in the air that should be in. In such a case, inflation would be better.

Mr Chiene was much interested in the attributing of the cessation of the respiration to a stammering condition of the respiratory muscles—the point to which Dr James had alluded. There was no doubt that in the human subject this stammering was one cause of the cessation of breathing. Another cause was undoubtedly the falling back of the tongue and epiglottis, and the closure of the glottis. He had learned the value of the insertion of the finger, as practised by Mr Bell, which acted reflexly as well as mechanically in opening the glottis. This and Mr Lister's explanation, that the drawing forward of the tongue acted reflexly in checking the stammering respiration, agreed with Dr Murray's observations and deductions. As to the practical points which had been noticed, he was certain of the truth of Mr Bell's remark, that after a person had got a quantity of chloroform he might, so to speak, go on for some time chloroforming himself from what was in the air in his chest, though the towel or other apparatus was away from him. Their object in such cases, then, should be to get the chloroform out of the chest; and he thought practical good would come of Dr Murray's suggestion.

Dr Allan Jamieson was struck by the slowing of the respiration caused by loss of blood. There was a condition analogous to this in anæmia and spanæmia, in which there was a peculiar slowing of the respiration. Apparently in these states there was a want of irritability of the respiratory centre, so that breathing did not go on well under the administration of chloroform. Altered conditions of the blood could not perhaps be observed in rabbits, but their effects in the human subject were worthy of notice.

Dr Graham Brown referred to experiments made by a foreign physiologist, about six or eight years ago, who observed that if chloroform was administered to dogs in large quantities, and pretty rapidly, there was a sudden inhibition of respiration. This inhibition was somewhat controlled by section of both superior laryngeal nerves, but not completely. If along with these the vagi were cut, there was a complete inhibition of the respiration. So far as the upper half of the tract was concerned, its inhibition was controlled by the superior laryngeal. The lower half was governed by the vagus or its recurrent laryngeal branch. In the later stages of chloroform narcosis, he fancied, one would have two causes for the cessation of the respiration,—either, what Dr Jamieson alluded to, the defective supply of blood to the respiratory centre, which they might conclude did occur, there being almost no blood pressure at all; and, second, that the blood was so saturated with chloroform that there was a local poisoning of the centre.

Dr MacGillivray had unfortunately, though not in his own practice, seen nine or ten deaths in London, Edinburgh, and abroad during the administration of chloroform. He had not the slightest doubt that most of these were cases of over-dose due to the fact that administrators had been taught to go on giving the chloroform till the conjunctiva was insensible. In one or two instances the deaths were almost certainly due to heart disease, and in another to asphyxia; but in the others there was undoubtedly an over-dose as the chief cause of death. There was another point of interest, and that was that whether from loss of blood or from shock due to prolongation of the operation, much less chloroform was required towards the end of a long operation than at the beginning. The most painful part—the insertion of the stitches—was at the end; yet the patient, though apparently out of the chloroform and quite conscious, very often felt no pain when this was being done. Perhaps Dr Murray might give an explanation of this peculiar phenomenon.

Dr T. A. G. Balfour said he had been of opinion that most of the troubles and deaths that occurred during the administration of chloroform were due to over-dose; that they were, in fact, cases of asphyxia, due to the exclusion of the oxygen of the atmosphere by the air-tubes being full of the vapour of chloroform and the blood being saturated with it, but a statement by Dr Murray led him to doubt this. It was that Dr Murray had found that the greatest danger was when he began to re-administer chloroform to animals to which for some time he had admitted only fresh air. He should like to have some explanation of this curious circumstance.

Dr Shand related a case in which, on the advice of the late Professor Alison, chloroform was given to prevent the daily recurrence, at a particular hour, of a nervous cry, which was supposed to be the result of a head injury. On the first day 2 ounces failed to produce anæsthesia. On the second, half an ounce succeeded, and in the course of time 15 minims were sufficient. Latterly, 5 minims alone were necessary, and the case was cured.

Mr Hare said the condition which Dr Murray happily called respiratory inco-ordination occurred in those cases in which he had been administering concentrated chloroform vapour intermittently. The vapour given to the human subject was diluted and uninterrupted. Did the inco-ordination happen in such conditions? In reference to the tube which Dr Murray suggested for removal of the chloroform vapour from the lungs, he wished to ask whether there was any provision in it to prevent the suction applied by the mouth being too great. It seemed to him that if not, a pulmonary hyperæmia, more particularly in children, might be caused.

Dr Murray thanked the Society for the kind reception it had given his "maiden effort" there. Mr Bell had referred to an interesting point—the possibility of allowing patients to over-chloroform themselves. He could confirm Mr Bell's opinion in the most absolute fashion as regards animals. If one was in a hurry, and screwed the animal to the clamp before sensori-reflex was quite abolished, it sometimes commenced to breathe with extreme violence; and if the chloroform bottle was connected with the tube, the animal was dead in a few seconds. Dr James's suggestion regarding the cause of the stammering bore in a direct way on the point, and he was glad to have this clinical confirmation of his observations. As to asphyxia, he agreed with Dr James that the process he recommended could not be applied. In reference to Mr Chiene's remark about reflex stimulation, he (Dr Murray) had omitted a point to which he should have referred. In one case of stammering, while the chest movements continued the tambour stopped. The conjunctiva was pinched, whereupon the tambour immediately indicated an air current; and this was repeated several times. It seemed to him quite likely that the pulling forward of the tongue acted, as the pinching of the conjunctiva, in a reflex manner. Dr Jamieson's remarks reminded him that he had often experienced great risk in the giving of chloroform to cases of uterine fibroid in which there had been much loss of blood. In such cases the patient would often stop breathing for some time. Similar experiments to those referred to by Dr Graham Brown were, he thought, made by François-Franck, who had since found that in rabbits the same effects were produced by dividing the trigeminal. With reference to over-dosage, Dr Hare appeared to think that the respiratory stammering was not likely to occur in man, because the vapour was diluted. It seemed to him that they were not certain as to the amount of dilution of the vapour. It was quite possible that an over-dose of the concentrated vapour might be given at the commencement of an administration, and whenever fresh quantities were poured on the cloth. In cases of ovariotomy, it was well known that the patient might suffer no pain even when the hand was in the abdomen, and yet be practically conscious. In the recent discussion on anæsthetics at the Medical Society of London, Mr Braine referred to this fact, stating that he had several times had patients capable of answering questions entirely unaware of the fact that the operator's hand was at that moment in the abdomen breaking down adhesions. The danger, then, was that when a fresh dose had to be given to permit of the stitches being put in, the deep inspirations which followed might cause the inhalation of a quantity of vapour fatal to the patient so long under the influence of the anæsthetic, and cause sudden stoppage of the respiratory movements in the way shown in some of the experiments.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLVI.—MEETING IV.

Wednesday, 11th February 1885.—Dr CONNEL, *President, in the Chair.*

I. *Dr Macdonald* exhibited the LEFT HORN OF THE UTERUS AND FŒTUS, removed by laparotomy, and the subject of his paper.

II. *Dr Skene Keith* showed a LOBULATED FIBROID, removed from a patient some time since. There was not much bleeding, but the mass had, by its bulk, prevented the patient pursuing her occupation, and it was accordingly removed. The patient is now quite well and fit for work.

III. *Dr Peter Young* read a paper on A CASE OF PULMONARY THROMBOSIS IN A PUERPERA, which will appear in a future number of this Journal.

Dr Macdonald had listened with pleasure to the paper. The subject was one of great interest, and he thought that Dr Young had come to correct conclusions regarding it. He had seen two cases of thrombosis of the pulmonary artery. Both cases had been subjects of hæmorrhage after delivery. In the first case death occurred very suddenly. In the other the progress was slower and the symptoms of progressive agony were very great. Both proved fatal. It is of interest if Dr Young is correct in holding that some of the sudden deaths that occur are due to this cause. He, Dr Macdonald, was of opinion that these sudden cases were more probably due to embolism. He had recently seen a case in which a lady with mitral obstruction disease went into labour and required forceps. There was great breathlessness and cyanosis. Two days after she was seized with aphasia and paralysis of the arm, and two hours afterwards had a convulsion of the cheek. She has improved as to the arm, and is doing well so far.

The President asked as to how long after parturition the thrombosis may occur.

Professor Simpson was indebted to Dr Young for narrative of the case, which was a rare one. In Professor Young's lecture, in last century, he described case which in the light of our present knowledge we knew to have been cause of thrombosis, but the nature of which was then unknown.

Dr Brewis showed a thrombus removed from the right ventricle of a patient who died suddenly on the eleventh day of her puerperium. The patient was a primipara, and her labour was an easy one, but she had suffered from acute rheumatism during the earlier part of her pregnancy, and the formation of the thrombus, which was evidently an ante-mortem one, was accounted for by the hyperinotic condition of her blood.

Dr Young thanked the Society for its reception of his paper. He believed we might have a thrombus occurring any time within three weeks.

IV. *Dr Angus Macdonald* read a paper on PREGNANCY IN THE LEFT HORN OF A BICORNUUS UTERUS SUCCESSFULLY REMOVED BY LAPAROTOMY, which appears at p. 873 of this Journal.

Professor Simpson said that cases of bicornuus uterus were rare, and it was still rarer to have pregnancy occurring in them. It was only within recent years that we could have met with them as Dr Macdonald had done, and it is only within that time that surgeons could have been prepared to deal with them. Now that the abdomen is being so frequently opened into, we may expect to meet them more frequently, and that the records of such cases may multiply. He was sure the Society was indebted to Dr Macdonald for the care with which he had recorded the facts of this case. It was interesting to note the presentation of the fœtus. The head was prevented presenting by the peculiar shape of the uterus, and the fœtus had adapted itself to the segment in which it lay. Dr Macdonald had made out a good case as to missed labour being explained by the pregnancy occurring in a horn of a bicornuus uterus.

Dr Skene Keith mentioned a somewhat similar case in which Dr Thomas Keith opened an abdomen expecting to find a fibroid tumour, but on cutting into it a fœtus was found. This was a case of tubo-interstitial pregnancy where the fœtus had been dead for nearly two years. The patient made a good recovery.

Dr Hart had had the good fortune to witness the operation. He had had a difficulty in accounting for the absence of an ovary, but Dr Macdonald's explanation made it plain. It would be important if Dr Keith would examine the specimen to which he referred, and see whether it presented similar features to that of Dr Macdonald's case.

The President was sure there was room for congratulation when one considered the changes which had occurred in practice in the seventeen years since Professor Turner brought the specimen to which Dr Macdonald referred in his paper. He thanked Dr Macdonald very heartily for bringing forward this case, marking, as it did, so great an advance in obstetrics.

Dr Macdonald thanked the Fellows. He felt satisfied that we had in the history of this case a sufficient basis for diagnosis in similar cases, and that in future we might with care arrive at a reasonable degree of certainty. He thought also, all things considered, that the view urged regarding missed labour won't meet with general acceptation.

CARLISLE MEDICAL SOCIETY.

MEETING V.

Thursday, April 9, 1885.—Dr LOCKIE, *Vice-President, in the Chair.*

Dr Macdougall read a paper on CERTAIN FATAL CASES OF RAPIDLY GROWING BRONCHOCELE, which will appear in a future number of this Journal.

Dr Maclaren said that goitre was common in this district. He had known strangers coming into the district become affected. In one case, in which there was considerable distress, he resolved to put in a seton. The boy died during the operation. Post-mortem, the walls of the cyst were found to be half an inch in thickness, and of fibrous structure; next the trachea the cyst wall was very thin. In another case of a lad with extreme dyspnœa it was found that if one portion of the tumour were held aside relief followed. This was done by a nurse for three days. Iodine was then injected every few days with marked success. In several cases with small, hard tumours, producing decided dyspnœa, injection of iodine shows good results. He considered ergotin useless.

Dr Lediard said that there had been three fatal cases in St Thomas's Hospital in one year. In young persons iodide of potassium always relieved the symptoms. He gave it in small doses, gradually increased, and pushed. In old persons there was not much danger, and iodide of potassium was useless. Malignant bronchocele was extremely rare.

Dr Lockie related a case of soft bronchocele associated with exophthalmos. There was frequent cardiac action, with vomiting and diarrhœa. The patient was a young woman. Under ergot and bromide of potassium the vomiting and diarrhœa abated, the heart became slower, but the exophthalmos remained.

Dr Morton read NOTES OF CASES OF INTESTINAL OBSTRUCTION TREATED BY OPERATION.

The following specimens were shown:—"Recent Endocarditis with Cerebral Embolism," by *Dr Morton*; "Cast of Internal Strangulation of Bowel," "Tumour of Lower Jaw," "Small Ovarian Cyst," "Cast of Omentum from a Hernial Sac," "Cephalotribe," by *Dr Maclaren*.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

THE EFFECT OF THE SALINE INGREDIENTS OF THE BLOOD ON THE CONTRACTION OF THE HEART.—In the *British Medical Journal* for 11th April, Professor Ringer records a series of experiments on the action of certain salts on the contraction of the heart. The experiments were carefully conducted, are exceedingly interesting, and the conclusions arrived at are very valuable,—some of which we briefly notice. He says, "When water only is made to flow through the ventricle, it speedily contracts, so remains, and, in a short time, dies,—the water producing in the ventricular, as in the skeletal muscles, 'water-rigor.' Now, if common salt be added to distilled water, in the same proportion as it exists in the blood, the ventricular contractions grow weaker and weaker; at last contractility ceases, and the ventricle stops in diastole, and a contraction cannot be excited by any strong stimulation, even with a strong galvanic induction shock. The addition of any other of the saline constituents of the blood, save one, will not restore the suspended contractility. The only constituent which will restore the contractility is lime. On the addition of a physiological quantity of a lime salt,—as, for instance, 1 part of calcium chloride to 10,000 parts of saline solution (0·75 per cent. of common salt),—spontaneous contractions return, and the ventricle very soon begins to beat as strongly as ever. Other soluble salts of lime act in the same way. For instance, calcium bicarbonate and lime salts, therefore, will sustain the contractility of the ventricular muscular tissue, and, indeed, are essential to the maintenance of the contractility. In fact, without a lime salt no single salt, nor all the saline constituents of the blood combined, can sustain contractility. Lime salts, though able to sustain the heart's contractility, are inadequate to maintain the circulation, for the diminution of the dilatation, owing to the fusing of the beats by a half or two-thirds, lessens correspondingly the amount of blood the ventricle can receive, and therefore propel into the arterial system. Any potassium salt, added to a single saline solution, accelerates the weakening of the ventricular contractions, and soon suspends all contractility; but on adding any potassium salt in physiological dose (as 1 part of potassium chloride to 15,000 parts) to saline, containing a physiological quantity of lime, the effect is most singular and interesting. The potassium salt quite obviates the delay in dilatation caused by the calcium salt, and insures a perfectly natural contraction. Potassium chloride partially antagonizes the effects of the lime salts, and by accelerating dilatation produces a natural contraction, and thus we have produced by the combination of calcium chloride, potassium chloride, and sodium chloride, a neutral solution capable of sustaining the ventricular contraction, and of producing perfectly normal contractions. Cold favours the effects of lime, whilst heat favours those of potassium. In conclusion, let me urge a practical suggestion, which seems to spring naturally from these experiments. In cases of profuse hæmorrhage, as in flooding, or in the excessive alvine discharges of cholera, it is of cogent importance that we should employ a fluid suitable to the life or death case. I think the foregoing inquiry points out that an effective injection should contain not only sodium bicarbonate, but physiological quantities of salts of calcium and potassium."

COCAINE USED IN THE VOMITING OF PREGNANCY.—The recently-published reports of the great anæsthetic and reflex inhibitory action of cocaine has led Dr Weiss of Prague (*Prager Med. Woch.*, 17th December 1884) to exhibit the drug in a case of persistent vomiting in pregnancy, after all other attempts at relieving this inconvenient and often dangerous symptom had proved futile. The patient was a woman of 28 years of age, in the third month of pregnancy, and of a nervous disposition, anæmic and debilitated. Persistent vomiting had been a constant symptom in her three preceding pregnancies, and threatened this time to result in inanition. Dr Weiss prescribed—

℞ Cocaine mur. in suff. quant. spir. vin. solut. gr. ii.
Aquæ dest. f. ℥v.
S. Teaspoonful every half-hour.

Three teaspoonfuls of milk given after the sixth dose were well borne, likewise a cup of broth with egg after the eighth dose, without the recurrence of vomiting. The frequency of the pulse being increased from 84 to 96, that of the respiration from 22 to 28 per minute, the pupils becoming dilated and the face flushed, it was thought prudent to withdraw the drug after the sixteenth dose, although the patient felt greatly improved, having even just previously enjoyed a meal consisting of chicken broth, some slices of white chicken meat, and a glass of Bordeaux wine, without vomiting. Hourly doses of cocaine given subsequently suppressed the vomiting completely, and enabled the patient to regain her former strength. Weiss stating the patient to be of the nervous and hysteric type, and that the drug was announced as a certain cure to the woman, the question arises, Whether we have to deal here with an actual specific against persistent vomiting in pregnancy, or whether the moral effect of the drug on the patient is entitled to a prominent consideration in the case? Scepticism is not out of place in therapeutics, but it would appear unwarranted to deny the value of a remedy in the face of immediate and obvious benefits produced by its application. Besides, the well-known anæsthetic and reflex inhibitory influence cocaine exercises over mucous membranes would *a priori*, from theoretical grounds at least, justly advocate its exhibition in cases of vomiting. Looking over the literature of coca and cocaine, we find that the remedy has been used ever since the 16th century against various affections of the digestive and nervous system, especially by the natives of Peru. Clusius (*Exoticorum libri decem*) states that the Indians answered his question, Why they were fond of chewing coca? "Because it drives away hunger and thirst, strengthens the body, and invigorates the mind." Martius, Fränkl, Töpig, and Tschudi all agree in the tonic effect of the drug on the nerves of the stomach. Aurep found cocaine to act as a paralyzant of nerve-centres and nerve termini, first lowering and finally suspending reflex action. Frohnmüller experimented with cocaine to ascertain its narcotic properties in phthisis, hysteria, glaucoma, and rheumatism, but with alleged negative results. Cocaine was first discovered and experimented with by Nieman in 1859. It is to be hoped that Dr Weiss's case will lead to further trials of cocaine, not only in vomiting of pregnancy, but also in other pathological processes where nervous excitation is the causative agency of the affection.—*Therapeutic Gazette*, March 1885.

ACTION OF BROMIDE OF ZINC.—Recent experiments instituted by Dr Testa have led their author to the following seven conclusions:—1. Bromide of zinc produces, in small doses, as first effect, a diminution of sensibility; in larger quantities it depresses the motor apparatus, achieving finally complete paralysis. 2. The motor and sensitive embarrassments disappear gradually, provided the quantity of the drug administered be not too excessive. 3. Bromide of zinc arrests the heart of a frog in its diastole, but more slowly than zinc alone. 4. This effect is the more attributable to the zinc, as other bromides, the bromide of potassium, for example, act simultaneously on motility and sensibility. 5. Bromine, associated with zinc, causes in different mammals great somnolence, which zinc alone is incapable of producing. 6. Bromide of zinc acts primarily on the peripheral extremities of the sensory nerves, and secondarily on the spinal cord and the efferent nervous branches. 7. The somnolence seems to refer to a cerebral difficulty, but the phenomena observed in the sphere of sensibility and motility are distinct appearances (*Revista Clinica et Therapeutica*).—*Therapeutic Gazette*, 16th March 1885.

THREE NEW LAXATIVES: CASCARA SAGRADA, EUONYMIN, AND IRIDIN.—Dr Senator (*Wiener Med. Bl.*, 8th Jan. 1885) speaks favourably of three new laxatives introduced by American physicians, viz., cascara sagrada, euonymin, and iridin. The tincture of cascara sagrada, prepared from the bark of *Rhamnus Purshiana*, indigenous to Oregon and California, produces perfectly normal and solid stools without irritating the intestinal mucous membranes. Its action is prompt and harmless, even after a protracted use. The dose is half a teaspoonful for an adult, twice or three times daily, if a moderate action only be required; it is scarcely sufficiently bitter to call for a flavouring vehicle. Its proper place in the pharmacopœia is between rhubard and senna, but has the advantage of acting in smaller doses than either of them. Euonymin, an alcoholic extract prepared from *Euonymus atropurpureus*, must be regarded as an energetic laxative and cholagogue. Rutherford, who examined its physiological action experimentally on dogs, finds the drug to exercise a powerful stimulation on the peristaltic movements of the intestines and the biliary secretion without irritating the mucous membranes to a higher degree than the milder acting laxatives do. It cannot be taken into continuation on account of its drastic action, and is to be placed in a line with podophyllin, with which it shares equality in action and dose. Iridin, an extract prepared from the root of *Iris versicolor* also resembles podophyllin closely in action, but requires nearly double the dose of the latter.—*Therapeutic Gazette*, 16th March 1885.

PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D., and WILLIAM RUSSELL, M.D.

CANCER A PARASITIC MALADY.—Ledoux-Lebard somewhat elaborately discusses this question. He regards cancer as an inflammation, to which has been added a specific element; this specific element, which he believes to be probably a vital organism, being the cause of its infectiveness. He grants that neither he nor others have yet succeeded in demonstrating the organism, and that inoculation experiments have been mainly negative, but does not accept these as conclusive proof against his contention. He concludes,—*First*, That from its clinical, etiological, and above all its anatomical characters, cancer presents an intimate resemblance to a parasitic malady, and that its resemblance to tuberculosis is a reason for suspecting its parasitic nature; *Second*, That as certain kinds of cancer, as actinomycosis, belonging to the group of sarcomas, are of parasitic origin, it is allowable to suppose that other kinds are also of parasitic origin. —*Archives Générales de Médecine*, April 1885.

LACTIC ACID AS A MEANS OF DESTROYING PATHOGENIC TISSUES. —As the result of researches made on this subject, Mosetig-Moorhof concludes that this acid is endowed with the property of destroying pathogenic tissues without impairing the healthy tissues. These observations have been verified in fungous growths, in lupus vulgaris, in superficial epithelioma, etc. The morbid tissue was dissolved into a pulp by the acid, while the surrounding tissue and the islets of healthy tissue within the neoplastic zone remained intact. The mode of application was as follows:—By means of plaster or bees-wax the surrounding healthy tissue was protected; a piece of linen or of absorbent cotton-wool the size of the affected area was soaked in a concentrated solution of lactic acid, and kept in its place by a layer of cotton-wool and a bandage. He has also employed a paste made of lactic and salicylic acids. The dressing was left on for 12 hours, when it was removed and the surface carefully cleansed. For the next 24 or 48 hours it was dressed with water, after which the acid was again applied. This process required to be repeated six or seven times, leaving an interval of a day or two between each application, before the neoplasm was destroyed. No pain was occasioned by it, and children bore it as well as adults (*Gazette Médicale de Paris*, 4th April 1885).—From *Centralblatt für Chirurgie*, 1885, No. 12.

THE NATURE OF THE VIRUS OF SYPHILIS.—Leloir, in a clinical lecture, discusses this question. He maintains that there is only one syphilitic poison, as there is only one smallpox, etc., poison. The so-called soft sore is not syphilitic, and there is no such thing as a syphilitic blenorrhagia. The poison is fixed, material, and non-volatile, and incapable of being transmitted by the atmosphere or by the breath, and is only conveyed by direct inoculation. Any attempt to penetrate beyond this is hypothesis, for the most delicate histological and chemical investigations have been powerless to determine its nature. It has analogies to tuberculosis and leprosy, in both of which a micro-organism has been demonstrated, which, in the former, has been cultivated pure, and successfully inoculated, while in the case of the latter (leprosy) all attempts to inoculate it have hitherto failed. In the case of syphilis its inoculability is too thoroughly proved, while the other two terms of the well-known proposition necessary to the acceptance of the microparasitic origin of a disease are wanting. He has very often sought for a micro-organism, but with negative results. In the discharge from an ulcerating sore he finds a great number and a great variety of organisms, but he holds it has not yet been shown that any one of them is the distinctive organism of the disease. He has entirely failed to produce in animals syphilis by inoculation, so that, even were the organism separated, it would be necessary to experiment on man to complete the proof.—*Le Progrès Médical*, 21st March 1885.

CALCAREOUS DEGENERATION OF THE HEART.—An old man of 85 years was admitted into hospital for diarrhœa. He had never had any illness. Nothing special was revealed on auscultating the heart, but the arteries were noted as being very atheromatous. He was discharged cured in a day or two, and resumed his ordinary occupation. Some five days after his discharge he complained of giddiness, and the following day he was seized with right hemiplegia, to which he succumbed in a few days. At the autopsy, in addition to the cerebral condition which was the immediate cause of death, the heart was enlarged and loaded with fat on its surface. The valves were practically healthy. Part of the organ had undergone fibroid degeneration, while the endocardial layers of the interventricular septum were infiltrated with calcareous matter. The vessels at this part were completely obliterated by endoperiarteritis. The coronary arteries were completely calcified, and only admitted a fine stylet, yet the patient had never shown the least symptom of angina pectoris. On the patient's second admission to hospital it was noted that the cardiac sounds were faint and its action extremely irregular. M. Robin thinks the absence of evidence of such a considerable lesion was the result of its being confined to the septum, which is one of the less actively important parts of the heart. Anatomically the process may be summarized as follows:—Lesion of the arterioles of the myocardium, formation of secondary patches of sclerosis around them; microscopical calcareous infiltration of the patches; complete calcification of the endocardium and of the parts beneath.—*Gazette Médicale de Paris*, 21st March 1885.

A PECULIAR FORM OF PULMONARY CONGESTION, NOT GENERALLY KNOWN, AND TERMINATING IN SUDDEN DEATH; ALSO A PLEA FOR CARDIAC ASPIRATION.—Dr Leuf of St Mary's General Hospital, Brooklyn, draws attention to what he regards as an unusual form of pulmonary congestion, in which both lungs are, as a rule, uniformly affected. When the congestion is not uniform it may occur in any part of the lung. When uniform, the lung on section is as black as ink, and pressure causes an exudation of thick black blood. Often there is œdema—not hypostatic, for it may be found in the upper parts of the lungs, the bases being free from it. Crepitation is usually present in all parts; if absent there is collapse. The middle lobe of the right lung may be free from congestion when all the rest is affected. The pleuræ are of a dark purplish-red colour, mottled with irregular bluish spots. The colour of the exterior often fails to convey an idea of the intense congestion. The right heart is enormously dilated, and the *ostium venosum* entirely incompetent, the auricle and ventricle being practically one large cavity. The circumference of the auriculo-ventricular orifice varies from 10 to 20 centimeters. The left heart is empty, or nearly so. The heart as a whole is relaxed. Seldom is there any valvular disease present. The peripheral veins are always empty and collapsed. The capillaries are not so full as usual, except in the face and neck. The greater number of cases occur among drunkards, but there are many exceptions. The principal factors in its production are cold, exposure, and privation. The cause is stated to be the absence of the normal nervous control of the pulmonary circulation owing to paralysis of the sympathetic. The blood stagnates in the lungs, and is found pent up in the venæ cavæ, right heart, and pulmonary arteries. Less air enters the lungs, and the blood becomes extremely carbonized and deoxidised. The duration of this affection is from six to forty-eight hours. There is a sense of impending death, with obstructed respiration, and a feeling of weariness. When dying, the face and neck become slowly congested. Death occurs in a moment, and without a struggle. No medicinal treatment is of any value; mechanical interference must be had recourse to at once. It is advised to draw blood from the right heart by aspiration. It is said to be safe, and the only thing likely to be of use. Venesection and arteriotomy are considered useless. The point selected for aspiration is the fourth interspace, about 1½ or 2 inches to the left of the median line of the sternum.—*The American Journal of Medical Science*, January 1885. (*Note.*—The above affection is commonly met with in this country, and we should not be inclined to adopt Dr Leuf's suggestion as to aspiration of the right heart for its relief.)

INTESTINAL OBSTRUCTION TREATED BY WASHING OUT THE STOMACH.—Three cases of this description are reported from

Küssmaul's clinique. It was resorted to in the first case for the relief of a patient, whose stomach was distended with gas and fluid. It gave so much relief that it was repeated five times in 12 hours, and the patient was soon cured of his obstruction, although purgatives, enemata, distension of the bowel with air, and the administration of narcotics, had all been tried without any beneficial result. A second case was equally successful, although there had been a history of typhlitis two years before. A third case, where there was believed to be intussusception and gangrene, did not recover. Küssmaul recommends that this harmless proceeding should always be tried before proceeding to abdominal section (*Gaz. Méd. de Paris*, 4th April 1885).—From *Berliner Klin. Wochenschrift.*

THE PATHOGENESIS OF BRIGHT'S DISEASE.—Before approaching the subject of the pathogenesis of Bright's disease, Nauwerck criticises the views of Aufrecht and Weigert. From the careful investigation of several cases, he states that even in high degrees of epithelial affection the existence of glomerulonephritis, without any or with very slight alteration of the secretory parenchyma of the glomerulus, is more noteworthy than the absence of inflammatory changes in the vessels. It is not uncommon to find in recently inflamed kidneys Malpighian bodies containing within the capsule abundant traces of exudation with red and white blood-corpuscles, while the closest investigation of the glomerular epithelium may show no visible deviation from normal structure. He is not, therefore, able to make Weigert's interpretation agree with the actual picture of glomerulonephritis. The primary lesion of the parenchyma, according to Nauwerck's observations, cannot be accepted in the sense of Weigert as an effective pathogenetic principle in Bright's disease. In a proportion of cases the secretory epithelium may show the first sign of commencing inflammation; and it is possible that such a lesion of the parenchyma (especially if it be of a necrotic nature) may induce a secondary inflammation. It must, however, be clearly shown that a renal inflammation, with its characteristics of exudation and proliferation, may occur without affection of the special structural elements; and further, that if such an affection is present at the same time, sufficient resting places, concerning the localization of the different processes especially, will seldom be wanting, which will allow the adoption of a secondary reactionary inflammation.—*Beiträge zur pathologischen Anatomie und Physiologie.* Erstes Heft. 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Psoriasis — Verruca — Epithelioma: A Sequence. — Dr James C. White relates two cases in which there arose in psoriasis of long standing, first, a warty outgrowth, and finally an epitheliomatous degeneration. In one case the subject was under observation for eighteen years. The psoriasis did not differ much from its ordinary type, except in its obstinacy, and in the continued intolerance of the skin to any active external remedies. Eight years after its first appearance—when the man was thirty-five—patches on the hands became less hyperæmic and scaly, and more elevated, and were gradually converted into sharply defined, prominent, firm, and horny outgrowths, some of them resembling the unpigmented formations of keratosis senilis, while others were more like callosities or warts. Seven years later, one of these, situated on the right palm near the wrist, became excoriated either by abrasion or fissuring, refused to heal by simple measures, and terminated in a small ulcer. This at times healed almost entirely, protecting itself with a thin epithelial covering, at times broke down and remained in an open indolent condition. The ulcer extended more deeply, and eventually implicated the whole palm of the right hand. A similar ulcer also formed in the left, and assumed a like fungous, exuberant aspect. The entire right hand and part of the left were removed in the spring of 1884. The wounds healed quickly, and the system having been relieved from a long-standing source of irritation, the patient regained his usual health, and the neighbouring tissues have continued unaffected. The second case was that of a man, aged 52, who had had psoriasis constantly since early manhood. Ten years ago, the patches of psoriasis on the hands began to assume a thickened horny appearance, and transformed themselves into true warty outgrowths. One of these on the palmar surface of the wrist softened and became a sore, which refused to heal. The parts around, as well as the ulcer itself, were freely removed, and the operation was sometime after followed by necrosis of the tendons and fasciæ, and finally deep cellulitis, under which the patient sank. The direct transformation of patches of psoriasis into epithelioma has not been observed, except in a case cited in Ziemssen's *Handbuch*, Band xiv., where the intermediary warty stage is not mentioned. The lesson to be drawn is that the transformation of patches of psoriasis into verrucous hypertrophy must be regarded as an ominous occurrence, and that the softening or other change of such horny growths demand thorough excision without delay.—*American Journal of the Medical Sciences*, January 1885.

Eczema following the Course of the Small Sciatic and

SHORT SAPHENOUS NERVES.—Mr Shearer relates a case described as essentially eczematous in its nature, which extends as a continuous ribbon-shaped band from the left buttock to the base of the little toe. It corresponds to a considerable extent with the courses of the small sciatic and short saphenous nerves. It has been in existence, in part at least, for nearly eighteen months. It began without any apparent cause, and it has not been associated at any time with neuralgic pains, or with any alteration in sensation. It affects a thin but fairly healthy boy of thirteen. The eruption commenced behind the knee of the left leg as a thickened and rough, itchy condition, and spread down and up, and as it extended it was red, itchy, and leeted a good deal. For about two inches above the heel it has assumed a warty character. Quite recently an attack of herpes zoster developed in the opposite thigh. The disease was at first confined to the small sciatic, subsequently attacking the short saphenous nerve, and so may be supposed to be dependent on some central changes in the ganglia of the cord.—*Glasgow Medical Journal*, February 1885.

LUPUS AND ITS TREATMENT.—At the Congress at Copenhagen one of the subjects for discussion was the etiology of lupus, especially in relation to tuberculosis. Besnier has maintained its tubercular origin on various grounds, but the divergence of opinion expressed at the Congress has led him to review the subject. He takes up first the nosographical unity of lupus, that though some writers have spoken of a syphilitic or cancerous lupus there is really a disease entirely distinct from these, though presenting varieties. There are, indeed, some forms of erosive or atrophic acne which bear some resemblance to lupus erythematosus, and certain forms of syphilides, of leprosy, or of scleroderma mutilans, may simulate lupus vulgaris. But these are rare, and can usually be eliminated by care in examination or by the test of treatment. He cites a case where a young priest consulted Fournier many years ago for a lesion of the temporal region, which was a closely set tubercular syphilide. The holy character of the patient, the absence of any appreciable antecedent specific lesion, joined to a vivid coloration of the tubercles, gave a peculiar interest to the case. But the age of the lesion pointed more to a syphilide than to lupus, and this was decided by the issue of treatment by iodine. Hence the nosological unity of lupus. Those dermatologists who do not admit the connexion between lupus and tuberculosis base their opposition on the following grounds:—The dissimilarity of lupus of the skin or mucosa and the lesions of the same parts now called tubercular. This is undoubtedly striking, but is not greater than that between various syphilides, or between the benign and flat epithelioma of the face and the vegetating and rodent. Another point insisted on is the contestable character of the affinity which exists between lupus and tuberculosis of other organs, in particular of the lung. Besnier cites his previous observations, and points out that those affected with lupus exhibit, in the large majority of instances, the precise character of the scrofulous diathesis, such as the old authors meant by this term before the discovery of the parasitic nature of tuberculosis. In this soil, tubercle, in those of its elementary forms which are proper to lupus, develops slowly, and in those affected with lupus, who become phthisical, the disease arises after a latent and slow fashion. As regards treatment, there is no curative method applicable to all cases; all the procedures which destroy mechanically (chemically) the lupous elements, all those which determine, in the part of the skin invaded, an exudative and eliminatory inflammation of moderate intensity, are curative. The practitioner who desires to treat lupus cannot improvise: he must have taken the trouble to see lupus cases treated, and have learned to manipulate on the skin the various appropriate therapeutic agents. The method of interstitial cauterization, by the aid of the thermo- or electro-cautery, suits the greater number of cases of lupus. It is alone, in fact, applicable to lupus of the conjunctiva, of the nasal cavities, or the bucco-pharynx. It is certainly the easiest and most certain, for the partial operations necessary in course of years are the subjects of lupus. Old, very extensive cases, with destruction effected, are indeed refractory in a measure to all medication. Here we can have recourse to suppurative dermatitis in the manner indicated by Schwimmer. The lupus surfaces are painted over with a saturated solution of pyrogallic acid in ether, or receive a pulverization of this etherial solution. In either case the surface becomes covered immediately with a white and adherent layer of pure pyrogallic acid, which is now at once covered over with a layer of traumaticine. In the succeeding days an irritation analogous to that of a strong vesicant is produced in the diseased tissues, at the margin a little swelling without redness. The resulting cicatrix is smooth, and the paintings or pulverizations are renewed until every deposit of lupus has disappeared from the tissues. No treatment is needed before suppuration has detached or ruptured the film of traumaticine. This method suits lupus vulgaris of the face best. For lupus erythematosus interstitial electro-cauterization is the mode of treatment *par excellence.*—*Annales de Dermatologie et de Syphiligraphie,* Janvier 1885.

DR WALTER G. SMITH, in an excellent paper, which condenses and embodies all the recent literature on lupus in addition to his own experience, arrives at the same conclusion as Besnier, that practically there is only one tuberculosis of the skin, and while lupus is always tuberculosis of the skin, yet tuberculosis of the skin assumes other forms than that of lupus. The evidence, he adds, is strong of the unity of cause in tuberculosis, lupus, and scrofulosis, although we do not yet know the special determining conditions of each case. The subjoined table may be useful for reference:—

TUBERCULOSIS OF THE SKIN.

1. Miliary Tuberculosis.	2. Lupus. (*Tuberculo-derma.*)	3. Ulcerating Scrofuloderma.
Miliary tubercles and ulcers as part of a general tuberculosis. Caseates. Very rare.	A harmless (*quoad* system) form of tuberculosis mostly limited to the skin. Does not caseate.	*i.e.*, ulcerations arising from bursting of a "cold" subcutaneous abscess. Often yields well to treatment.

Symmetrical.	Unsymmetrical.
Lupus erythematosus.	Lupus vulgaris.
Lupus sebaceus, etc.	Lupus exulcerans.
Very difficult to cure.	Local malignancy.

Aberrant forms.

Speaking of the diagnosis of lupus, Dr Smith protests against the mischievous error in nomenclature in the use of the term "syphilitic lupus." Whether we accept or not the doctrine of the specific tuberculous nature of lupus, we cannot at one time have a syphilitic lupus and at another time a non-syphilitic lupus. The term lupoid ought also to slide out of use as the word cancroid has. There are occasional cases where a doubt may arise as to the diagnosis between lupus and psoriasis, though Mr Hutchinson's proposal to designate certain obstinate scaly red patches by the hybrid term psoriasis-lupus is a step in the direction of confusion. There is, too, at times a difficulty in discriminating between chronic eczema and lupus, as when the latter is confined solely to the helices of the ears, and in primary lupus of the inside of the nostrils. As regards treatment, speaking broadly, he prefers the method by scraping, best followed up by immediate cauterization of the raw surface, in the hope of destroying the outlying germs of the disease.—*Dublin Journal of Medical Science*, February 1885.

PERISCOPE OF SYPHILOLOGY.

By Francis Cadell, F.R.C.S. Ed.

The Latest Information relating to Venereal Diseases in the Army.—The following information is derived from the Army Report for 1882, and has been communicated to the Members of Parliament by the National Medical Association for the Repeal of the Contagious Diseases Acts. The report embraces a period which commences six years before the Contagious Diseases Acts were in existence, and it terminates with the last year in which they were in complete operation, and it also enables a comparison

to be made (which has never before been possible) between the first period of some years of their *perfect* operation, and the last period, of equal duration, of their *equally perfect* operation, and this comparison results in showing *a large increase*, both in the number and the severity of the cases, in the subjected stations *during the last* of these two equal periods. SECONDARY SYPHILIS has risen in the whole army since the Act of 1866; and the average amount of the whole period of sixteen years since that date is above one-tenth higher (10·2 per cent.) than it was when the Act was passed. PRIMARY VENEREAL SORES have risen largely in the subjected stations (41·3 per cent.) during the last period of three years, 1880–2, in which the Acts have been in the most complete and unobstructed operation, when compared with the first period of equal length (1870–2), during which they were in equally perfect operation. The average ratio of three years, from 1870 to 1872, was 53·3 per 1000 men. The average ratio of three years, from 1880 to 1882, was 75·3 per 1000, being an increase of 41·3 per cent. During the years 1873 to 1879 there was so much concealment of disease, owing to "Lord Cardwell's" order punishing all venereal cases sent to hospital, as to invalidate all statistics. The authors of this leaflet make a comparison between the 100 stations not under the Acts and the 14 subjected stations, which hitherto the army authorities have not considered suitable for comparison. The ratio per 1000 men for primary venereal sores is 78 in the 14 stations under the Acts; while in the 100 stations not under the Acts the ratio is 82 per 1000 men, being a very slight difference. The ratio of gonorrhœa is higher under the Acts than in the 100 stations not under them. The ratio being for the 14 stations under the Acts 100 per 1000 men; in the 100 stations not under the Acts 93 per 1000 men. From this Army Report for 1882 it appears that secondary disease has increased much above its amount at the date when the Act of 1866 was passed (10·2 per cent. on the average of the whole period of 16 years). Primary sores fell largely in the stations afterwards subjected, for years before there were any Acts, but they have, on the contrary, increased largely during the last years of the most perfect and unobstructed operation of the Acts—the average ratio from 1870–2 being 53·3 per 1000, while the average ratio for the three years 1880–2 has been 75·3 per 1000, being an increase of 41·3 per cent. Gonorrhœa has fallen slightly in the subjected stations, there being an improvement of less than 7 per cent., but this disease has long been acknowledged to be no ground for exceptional legislation.

SUPPURATING BUBOES.—M. Martineau has recently treated suppurating buboes by means of the thermo-cautery, whereby an ulcer is formed which tends to heal rapidly.—*Lancet*, 28th Feb. 1885.

THE TREATMENT OF GONORRHŒA BY A NEW DRUG.—Mr

Alfred Wright draws attention to the therapeutic action of *Jacaranda lancifoliata.* The drug acts specially on the genito-urinary mucous membrane, and appears to have no deleterious effect in any way, whilst it is taken without nausea. As a remedy for gonorrhœa he believes it will take the place of all other drugs used internally for this disease. The dose of the liquid extract is twenty minims or half a drachm three or four times daily.—*Lancet,* 28th Feb. 1885.

OCCASIONAL PERISCOPE OF THE DISEASES OF CHILDREN.

By CHARLES E. UNDERHILL, M.B., F.R.C.P.E., Physician to the Royal Hospital for Sick Children.

ABDOMINAL TUMOURS IN CHILDREN—SIX CASES.—These cases illustrate the varieties of abdominal disease which are seen in the out-patient department of a children's hospital. The diagnosis was not verified in all the cases, and in several it presented great difficulties.

CASE I.—Local tumour of unknown duration occupying the descending colon. There was a history of frequent constipation, sometimes lasting four or five weeks. Probably fæcal accumulation.

CASE II.—Probable sarcoma of right kidney. The tumour grew very rapidly while under observation; great emaciation, and quickly fatal issue. No P.M. allowed.

CASE III.—Cystic degeneration of right kidney. This child died at 19 months old, and on section the right kidney was found to be converted into an immense collection of cysts, the whole weighing seven pounds and three quarters; abdominal enlargement had been observed for seven months.

CASE IV.—Cyst occupying the right half of the abdominal cavity. Congenital; probably hydronephrosis of right kidney. The tumour, which was just seen when the child was six months old, was tapped several times at intervals of about three months, and a clear albuminous fluid drawn off, which differed very little from water, only containing about one per cent. of solid residue; a very full analysis is given. Aspiration always gave much relief. The tumour was said by the mother to occasionally get much smaller of its own accord. The case was eventually lost sight of.

CASE V.—Cyst of unknown origin occupying the greater part of the abdominal cavity. One and a half year's duration. Child 2½ years old, a boy. The abdomen was greatly distended, dull everywhere on percussion; superficial veins very large. Sixty-two fluid ounces of a dark brown coloured fluid, loaded with cholestearine, were drawn off—sp. gr. 1016. Much albumen; after tapping a rounded hard mass was felt under the free margin of the liver. The cyst soon filled again, and grew in size from above downwards. No further history.

CASE VI.—Abdominal cyst, central, unilocular, of unknown duration. A boy of four years. Abdomen uniformly distended, resonance in flanks, dulness in centre. Eighty-eight ounces of dark brown fluid, containing cholestearine and albumen, were drawn off—sp. gr. 1021. The cyst did not refill, and six months later no trace could be found of it.—E. N. Whittier, M.D., *Boston Med. and Surg. Journ.*

EPHEMERAL HIGH TEMPERATURES IN YOUNG CHILDREN.—Bouchut's aphorism, "In the first stage of childhood there is no relation between the intensity of the symptoms and the extent of the material lesions," is the text of this paper. It deals only with one symptom, viz., ephemeral high temperature. In all the cases given the temperature went up suddenly, in one case as high as 106°, and in a few hours fell again, when all grave symptoms disappeared. These are very puzzling cases, and the only explanation seems to be in an insufficient regulating power of the nervous system. Chloral was found the most efficient remedy, assisted sometimes by a warm bath. The following points assist in forming a diagnosis:—1. Absence of any local inflammation or recent injury; 2. Abrupt beginning without prodromata, rapid rise of temperature, and early severity of febrile symptoms; 3. The duration is very short, usually not more than twenty-four hours, often less; 4. Absence of eruption; 5. Absence of abdominal symptoms of enteric fever, and circulatory symptoms of meningitis; 6. Absence of jaundice, or of enlargement of liver or spleen; 7. Absence of epidemics of all kinds.—H. N. Read, M.D., Brooklyn, *New York Med. Jour.*

ON ACUTE ENCEPHALITIS IN CHILDREN (Polio-encephalitis acuta, cerebrale kinderlähmung).—While the acute *spinal* paralysis of children is well known, and has been abundantly described, acute *cerebral* paralysis has met with scant attention, and yet it is not a very rare disease. It attacks suddenly children for the most part in good health, often the exceptionally strong and robust. Of 24 cases observed, 7 were in the first year, 8 in the second, and 4 in the third, the rest of the children were between three and six years old. Ætiology indefinite. Symptoms of initial stage,—fever, vomiting of a cerebral character, convulsions. This stage may last only a few hours, or may be prolonged for weeks. These are followed by the main feature of the disease, viz., paralysis of one-half of the body. This may come on after a single convulsion, or may be delayed; it generally occurs suddenly. The child speedily recovers from the shock. The paralysis is not often complete, and some power is eventually regained, but recovery is not perfect. The arm is more deeply affected than the leg, but in neither is the paralysis so complete and lasting as in poliomyelitis. The lower parts of the face are not often affected, but in several cases strabismus has been observed. In some cases there is no special paralysis, but a kind of general ataxia. This disease is never attended by a peculiar degenerative atrophy of the muscles, and consequently the electrical "reaction of degeneration" is not present. In some cases there is an arrest of growth in the paralyzed extremities; this shows itself in after life most strikingly in a shortening of the arm, sometimes to the extent of 2 to 3 inches. The limbs do not hang passively as in spinal paralysis, but some amount of muscular tension is present; a strong contracture is, however, rare. The tendon reflexes are often increased on both sides. Signs of irritation in the motor centres come on later, the patients very commonly becoming confirmed epileptics, the attacks almost invariably beginning in the paralyzed side. There is, in fact, symptomatic epilepsy, indicating a local lesion of the cortex. A still more common sequela is athetosis; indeed, the majority of cases of athetosis are due to this cause. The sensibility of the affected side is not much altered. The moral and intellectual faculties are often, but not always, stunted and perverted. The seat of the disease, as shown by sectio as well as indicated by the symptoms, is in the gray matter of the cortex cerebri, especially of the central convolutions. A brief comparison of this disease with the well-known spinal paralysis of childhood closes an interesting paper.—Prof. A. Strümpell, Leipzig, *Jahrb. f. Kinderheilk.*, xxi. 3.

Part Fifth.

MEDICAL NEWS.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 3rd April 1885, and were admitted L.R.C.P. Ed.:—David Harris, London; Arthur Edward Deck, Southwold, Suffolk; Edward Buxton, Liverpool; William Glover Moore, Liverpool; Francis Ernest Little, Stroud, Gloucestershire; Henry William Russell Bencraft, Southampton; Thomas Charles Moore, Spalding, Lincolnshire; Arthur Matthey, Southampton; Hope Wilkes Gosse, Hastings; Walter Perfect Squire, Torquay; James Edward Gabb, Cheltenham; William Ker Shea, Dublin; Francis Dingley Pitt, London; Loftus Campbell, Enniskillen.

A Case Illustrating the Treatment for Opium-Poisoning.—The following case, although it may not be instructive in a professional way, may be entertaining. "It is a true story." Among the students residing with Dr H——, of Dublin, was a young man, who had received a very severe wound to his tender emotions in an *affaire du cœur*. One morning he was absent from the breakfast-table, and, as he had shown symptoms of "indisposition" for several days, a student was sent to his room to inquire into the matter. It was found that the young man had been taking laudanum, for a small bottle labelled tr. opii, and nearly emptied, was on the table by his bed, and deep sleep seemed to have overcome the victim of woman's treachery. Hastening down to Dr H——, the student informed him of the dangerous condition of his medical brother upstairs. The doctor did not seem inclined to hasten, however, but, to the amazement of his scholars, went to a little closet and brought out a stout rawhide. Ordering a cup of coffee and some emetics, he proceeded to the chamber of the supposed suicide. The rawhide was concealed. A good emetic was administered, and afterward some strong coffee. "Gentlemen," said Dr H——, "we have here a very interesting case of attempted poisoning with laudanum. The emetic, which I have administered, has happily proved successful, and the patient has received a cup of strong black coffee. He still remains in a drowsy, sleepy condition, and this, gentlemen, as you are well aware, is of the greatest danger. Out of this sleepy state he *must* be brought, and he must be kept clear from it. I will remove the bedclothes." So saying, the doctor pulled down the bedclothing, exposing the strong limbs of the youthful Æsculapius. *Whack* went the rawhide well across them at the same moment, skilfully applied by the patient's preceptor. Again the whip descended, and the poor student, smarting with pain, sprang from the bed and tried to escape. The strong arm of the doctor secured him, and the rawhide continued its cruel work. "Stop, in mercy, stop!" cried the miserable youth. "Gentlemen," said Dr H——, "in cases of this kind it is your duty to keep the patient awake, and to endeavour to save his life. If you are hindered in your efforts by any false ideas of pity, of over-sympathy, you wrong your patient, and must be responsible for the consequences." Down came the cruel hide again, and, smarting with pain, the poor victim howled for mercy. "Gentlemen," exclaimed the doctor, "let this be a good lesson; never give up a case of opium-poisoning. As long as the patient is awake there is hope, and you must keep him awake." Again the hide descended and again, until at last the poor fellow protested that he had only swallowed a drop or two to make him sleepy, and that it was all pretence. "Gentlemen, never be influenced by the cunning of would-be suicides, who strive in every way to deceive, in order to make their dreadful attempts successful." Down came the hide again, and the poor sufferer began to think the misery would never cease. With a farewell cut the doctor let him creep into bed again. "Gentlemen, I think we can now leave our patient with safety to himself," and, turning to the sobbing student, he said: "If you ever really wish to terminate your life, which God forbid, go to some lonely place and do it, and keep your fellow-mortals free from the agonizing suspense."—*New York Medical Record.*

THE "PILES."

BY THOMAS W. POOLE, M.D., LINDSAY.

The piles! Aha! I know them well,
  Each feature, though I may not see 'em;
Old foes, which fume, and fret and swell,
  And vex and plague my perineum.

You blush at mention of a "pile,"
And would, perhaps, the theme avoid:
Well, then, suppose, to put on style,
We call the thing a hæmorrhoid.

Though bearing an ill-omened name,
It seemed as if they might not pain us,
When first, as visitors, they came,
And took up lodgings in the anus.

But now, at each succeeding bout,
The pelvic pains appear distincter;
And there can be no longer doubt
Of their relations with the sphincter.

You ask me, by what obvious sign
One may with certainty detect 'em?
Well, I can only say that mine
Are like a hornet in the rectum.

Which, having wandered from the way,
And angry at the situation,
Stings right and left, while yet it may,
And tortures one in defecation.

"Avaunt! it is a vulgar rhyme."
Yet stay, there must be means to cure 'em:
Oh, yes! if you but give them time,
And meanwhile patiently endure 'em.

There are a thousand cures, you know,
All certain sure, as dead-shot candy;
'Tis well to buy a score or so,
And lay them by to have them handy.

And when the hornet's rage is spent,
And things assume their wonted quiet,
The cure—though it may not prevent,
Will quickly quell the painful riot.

Canadian Practitioner.

OBITUARY.

PROFESSOR MORISON WATSON, M.D., F.R.S., ETC.

THE announcement of the death of Morison Watson, M.D., F.R.C.P. Ed., F.R.SS. Ed. and Lond., Professor of Anatomy and Dean of the Medical School at the Owens College, Manchester, which took place on the 25th of March, was received with feelings of the deepest regret and sorrow.

Dr Watson had only reached his fortieth year. In the prime of a life full of rich promise, apparently in robust health, and in the very midst of his duties, Dr Watson, whilst lecturing to his class on the 7th of February, was struck down with apoplexy; though he rallied somewhat, he never really regained consciousness, and a second seizure proved rapidly fatal. Dr Watson was born at Montrose, but at an early age was taken to Edinburgh. He was educated at the Institution, and subsequently at the University of which he became a distinguished graduate. Thereafter he pursued his studies at the Medical Schools of Berlin and Vienna, devoting himself especially to anatomy and histology. For many years Dr Watson worked in the anatomical rooms of the University of Edinburgh, as student, as Assistant Demonstrator with Professor Goodsir, and, lastly, as Senior Demonstrator with Professor Turner. In 1874 he was appointed to the newly-instituted Chair of Anatomy at the Owens College, Manchester, and this position he continued to occupy up to the time of his death.

Into the duties of his professorship, and to the development of a school of anatomy in the broad sense, Dr Watson threw his whole energies and abilities. It was the object of his life. Not only by his own work, but also by his ever-ready and generous encouragement to others, the School of Anatomy at Manchester has been advanced, and its interests promoted, until it now ranks as one of the few English schools in which the teaching of human anatomy has gone hand-in-hand with the development and encouragement of original investigation in a wider field. A spirit of devotion to the highest interests of the Medical School of the Owens College was always the governing principle which guided Dr Watson's efforts. He was quick to recognise and to meet the requirements of the students of his class; to every one he was kind and courteous.

As a lecturer and as a colleague he was most popular, and by his kindness of heart and readiness to help endeared himself to colleagues and students alike, by both of whom he was held in the highest esteem. Dr Watson was, however, of a retiring disposition, and it was only those who knew him intimately, and in his home life, who could fully realize the warmth of his nature, his sturdy straightforwardness, his utter contempt for all sham, and the strength and affectionate nature of his friendship. Of such friends he had many, and by them his memory will long be affectionately cherished as that of a friend true and faithful, genial and generous.

Dr Watson published many valuable contributions to human and comparative anatomy. His first paper, "On the Mechanism of Perching in Birds," formed part of a graduation thesis, "On the Myology of the Hind Limb in Birds," for the degree of Doctor of Medicine. The thesis was submitted to the Medical Faculty of the University of Edinburgh in 1867, and for it the author received a gold medal; the paper was afterwards printed in the *Journal of Anatomy and Physiology*. In the same Journal Dr Watson also published a series of "Contributions to the Anatomy of the Indian Elephant," and this series he more recently extended in the *Transactions and Proceedings of the Zoological Society of London*. In the *Journal of Anatomy* there also appeared papers on "The Termination of the Thoracic Duct on the Right Side" (1872); "Notes on a Remarkable Case of Pharyngeal Diverticulum"

(1874); "A Case of Double Aortic Arch" (1877); "The Homology of the Sexual Organs illustrated by Comparative Anatomy and Pathology" (1879); and on "The Curvatores Coccygis Muscles in Man" (1880).

To the *Proceedings of the Zoological Society of London* Dr Watson contributed four important papers "On the Anatomy of *Hyæna Crocuta*" (1877-81); and, in addition, papers on the "Anatomy of *Chlamydophorous Truncatus*," and "On the Muscular Anatomy of *Proteles*." In vol. xxix. of the *Transactions of the Royal Society of Edinburgh*, the results of an examination of a white whale, for some time exhibited in Manchester, are embodied in a memoir "On the Anatomy of the Northern Beluga compared with that of other Whales."

In 1881 an important paper by Dr Watson "On the Female Organs and Placentation of the Racoon" was communicated to the Royal Society of London by Professor Huxley.

The most extensive and important—as it was the most laborious—of Dr Watson's contributions to zoology is, however, to be found in his elaborate and able report "On the Anatomy of the *Spheniscidæ*," collected during the voyage of H.M.S. Challenger. It occupies a considerable portion of vol. vii.—Zoology—of the "Reports on the Scientific Results" of that voyage.

Other papers of interest appeared in the *Journal of the Linnean Society*, in the *Annals and Magazine of Natural History*, and in the *Edinburgh Medical Journal*.

Dr Watson has left a lasting record of conscientious work, of indomitable energy, and of his power and ability.

CORRESPONDENCE.

STIRLING DISTRICT ASYLUM,
LARBERT, *2nd April* 1885.

SIR,—In the very able and exhaustive paper read by Dr Clouston on 4th March to the Edinburgh Medico-Chirurgical Society, and in the discussion which followed, a good deal was said in reference to the exact position of the sheriff in signing the ordinary lunacy warrant (25 and 26 Vict. cap. 54, sec. 14). "At present different sheriffs act on different principles in regard to this vital matter. One acts ministerially, another judicially." Dr Clouston's own opinion was that the sheriff does not act judicially, but that his study lies in seeing that all the necessary legal forms have been observed, and that the petition, statement, etc., have been correctly filled in. "I do not think he is properly qualified to say whether the 'facts indicating insanity' do indicate it or not, that being a medical question, just as is the question of suitability for care and treatment." Subsequent speakers, including Dr Ireland, Sheriff Thoms, and Dr Yellowlees, expressed more or less dissent from this view, and inclined to the opinion that in signing the lunacy warrant the sheriff acts judicially.

I venture to think that this matter will be placed in a clearer light if regard is had to the true nature of the proceeding and the exact position both of the sheriff and the medical men, and I am not sure if these were definitely laid down by any of the speakers. To all intents and purposes the proceeding under this section of the Lunacy Act is an Inquiry into the mental condition of the alleged lunatic, and into the question of whether he is a proper person to be detained under care and treatment in an asylum. The medical man in granting his certificate is really in the position of a skilled witness. Founding upon his special knowledge and training, he is giving evidence upon matters of scientific fact. The condition of lunacy is just as much a matter of fact as the condition of phthisis or any other disease.

The fact of the writer of the certificate having to state the grounds of the conclusion he has arrived at would indicate that the sheriff is expected to judge of the sufficiency of these grounds towards proving the conclusion. Were the sheriff not endowed with judicial powers in such cases, a mere statement of the fact as in a death certificate or in an official return would be all that would be necessary.

Fundamentally the preliminary steps in a case of lunacy are not dissimilar from those taken when the liberty of any subject has to be interfered with. In the latter instance the case is brought with a statement of the facts before a regular judge, evidence is adduced as to these matters of fact, and the decision is based on the judge's view of the weight and validity of the evidence. All these elements are found in the proceedings, taken under 25 and 26 Vict. cap. 54, sec. 14. In "Form A" the petitioner makes the statement that "it appears from the subjoined statement and accompanying medical certificates that Blank is at present in a state of mental derangement, and a proper person for treatment in an asylum for the insane, may it therefore please your Lordship to authorize, etc." Surely this obviously lays upon the sheriff the duty of weighing the evidence and deciding whether it justifies the prayer of the petition.

The argument that the sheriff is unfit to judge on these points in consequence of their being purely medical is scarcely a valid one. A judge is constantly called upon to decide matters involving scientific and professional details. It is not supposed that in trials of this description no one is capable of giving a decision unless he has been a careful student of the science or profession involved. Many a judge sits upon a bank case who has no particular knowledge of special accounting, or upon a pollution case, who has no knowledge of chemistry or the trades interested. In such cases they have the evidence of skilled experts, and the carefully trained legal mind has little difficulty in deciding upon what side the weight of evidence lies. This is very much the position of the sheriff in reference to the lunacy warrant.

That the ordinary proceeding in cases of lunacy partakes of the nature of an Inquiry is further borne out by what is done in so-called procurator-fiscal cases. In these the sheriff holds a regular trial, and takes both medical and general evidence as to the patient's mental condition.

In reference to the liability of medical men to actions of damages for lunacy certificates, there can be no doubt that their position would be greatly strengthened were the principle I have indicated more generally recognised. Of course, if a somewhat fictitious value is attached to their opinion, and they are looked upon as virtually the judges in the matter, they cannot be surprised if at times a somewhat extravagant penalty is demanded for supposed error. On the other hand, if their position as witnesses were definitely recognised, the only question that could be brought against them would be in reference to their *bona fides*. That being admitted, all other responsibility would be covered by the sheriff's signature.

I have to thank you for your courtesy in favouring me with space for this letter.—I am, Sir, your obedient servant,

JAMES MACLAREN.

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JAMES F. ALLEN, M.D.,—Is Enteric Fever a Cattle Disease? Pietermaritzburg, 1885.

EMIL BEHNKE and LENNOX BROWNE, F.R.C.S. Ed.,—The Child's Voice. Sampson Low, Marston, Searle, & Rivington, Lond., 1885.

LENNOX BROWNE, F.R.C.S. Ed.,—Voice Use and Stimulants. Sampson Low, Marston, Searle, & Rivington, Lond., 1885.

O. BROWNE, M.A., M.B.,—Aneurysms of the Aorta. H. K. Lewis, Lond., 1885.

T. BRYANT, F.R.C.S.,—Harveian Lectures. J. & A. Churchill, Lond., 1885.

T. CHRISTY, F.L.S., etc.,—New Commercial Plants and Drugs. Christy & Co., Lond., 1885.

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W. H. CORFIELD, M.A., M.D., etc.,—Dwelling Houses: their Construction and Arrangements. H. K. Lewis, Lond., 1885.

F. H. HAMILTON, M.D., etc.,—A Practical Treatise on Fractures and Dislocations. Smith, Elder, & Co., Lond., 1884.

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K. M'LEOD, A.M., M.D., etc.,—Operative Surgery in the Calcutta Medical College Hospital. J. & A. Churchill, Lond., 1885.

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WM. ROBINSON, M.D.,—Endemic Goitre. J. & A. Churchill, Lond., 1885.

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JOHN C. THOROWGOOD, M.D.,—On Bronchial Asthma. Baillière, Tindall, & Cox, Lond., 1885.

J. L. W. THUDICHUM, M.D., etc.,—On the Coca of Peru. Baillière, Tindall, & Cox, Lond., 1885.

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Dr W. ZOPF,—Die Spaltpilze. E. Trewendt, Breslau, 1885.

Dr W. ZOPF,—Die Pilzthiere oder Schleimpilze. E. Trewendt, Breslau, 1885.

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Physical Examination.—Abdomen enlarged and distended, and tolerably symmetrical. Measurement round umbilicus is 47 inches. Feeling of tumour is uniformly smooth. Percussion note in the mesial line is dull throughout, only slightly clearer on approaching the ensiform cartilage. Right flank far back, loudly resonant. Left flank resonant, but less so. Percussion thrill can be felt, and the resulting movements can be seen all over the abdomen. *P. V.*—Uterus low placed and quite free. No part of tumour projects into pelvis. Sound enters 2½ inches.

Operation was performed on 18th September. The tumour was found to have no adhesion. The aspirator was introduced. The fluid removed was exceedingly clear, and amounted when measured afterwards to 45 pints; density 1012. The tumour was unilocular and attached by a comparatively narrow base to the left broad ligament. The right ovary was natural. The pedicle was secured in a Staffordshire knot and the tumour clipped off. The abdomen was now wiped clean, and the dressings applied in the usual fashion. The fluid

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By Angus Macdonald, M.D., F.R.C.P. Ed., F.R.S.E., Physician and Clinical Lecturer on the Diseases of Women, Royal Infirmary; Lecturer on Midwifery and Diseases of Women and Children, Medical School, Edinburgh.

(*Read before the Edinburgh Obstetrical Society, 25th March* 1885.)

(*Continued from page* 1030.)

II. *Laparotomy for Removal of a Broad Ligament Cyst.*

Case VI.—Mrs H., æt. 46, residing in Dunfermline, admitted 11th September 1884, complaining of great swelling of abdomen and frequent desire to micturate. Patient has had five children, the youngest 14 years of age. Menstruation ceased three years ago, and immediately afterwards the abdomen began to swell. Since then the increase in size has been gradual.

Physical Examination.—Abdomen enlarged and distended, and tolerably symmetrical. Measurement round umbilicus is 47 inches. Feeling of tumour is uniformly smooth. Percussion note in the mesial line is dull throughout, only slightly clearer on approaching the ensiform cartilage. Right flank far back, loudly resonant. Left flank resonant, but less so. Percussion thrill can be felt, and the resulting movements can be seen all over the abdomen. *P.V.*—Uterus low placed and quite free. No part of tumour projects into pelvis. Sound enters 2½ inches.

Operation was performed on 18th September. The tumour was found to have no adhesion. The aspirator was introduced. The fluid removed was exceedingly clear, and amounted when measured afterwards to 45 pints; density 1012. The tumour was unilocular and attached by a comparatively narrow base to the left broad ligament. The right ovary was natural. The pedicle was secured in a Staffordshire knot and the tumour clipped off. The abdomen was now wiped clean, and the dressings applied in the usual fashion. The fluid weighed 57 lbs. and the cyst wall about 1 lb. Recovery was excellent. Flatus, per rectum, was passed the day after operation. Deep stitches were removed on eighth day; bowels moved same day. Dismissed, 22nd October 1884.

The fluid in this tumour was very characteristic of this kind of cyst. It gave no precipitate with heat and nitric acid, but a free white deposit with nitrate of silver, showing absence of albuminoid contents, but the presence of chlorides. Such tumours belong to a class that frequently do not refill after tapping. But apart from that being by no means a regular result, it appears to me that it is safer to remove them than to tap. A cyst of such size flopping about in the abdomen is certainly not without risk even if it remains empty, as it may get strangulated by twisting its pedicle, or may get involved among the intestines in such a way as to interfere seriously with their action. On the other hand, as pointed out by Doran, these cysts not unfrequently contain papillomatous masses on their walls which, when they are tapped, may infect the peritoneum and thus lead to disastrous results.

Besides, the ease with which they can be removed is so great, as they can be completely emptied, and thus can be removed through a very small incision, whilst they rarely form adhesions, that it is scarcely possible the patient's life could be compromised by operation, provided ordinary care and skill is exercised in conducting it. These tumours explain some rather extreme statements occasionally made in obstetrical literature. Thus to this category belong the cases of so-called ovarian tumours that are now and then reported to be cured by tapping. To them also belong those so-called ovarian tumours regarding which it has been reported that both ovaries have been removed, and yet the patient has subsequently become pregnant. They originate in the parovarian body or in the other remains of the Wolfian body contained within the folds of the broad ligament. They do not necessarily involve the structure of either ovary. In the present case the ovary was flattened over the base of the tumour. But in a case which I hope to relate to the Society by-and-by, and the cyst of which I recently showed to it, the cyst was entirely separated from the ovary. It is therefore quite possible to remove two such cysts without injuring either ovary or tube, and therefore without necessarily impairing the woman's procreative capacity. They can at once be identified from true ovarian tumours by their unilocular character, and by the fact that the peritoneum covers the cyst wall, which it does not in an ovarian tumour.

III. *Laparotomy for Removal of Sero-Sanguineous Cyst of Peritoneum (Mesentery?)*

CASE VII.—Mrs W., æt. 42, residing in Grangemouth, recommended by Dr Linton, was admitted on 6th September 1884,

complaining of pain and swelling of the abdomen. About the middle of November last patient noticed a lump a little bigger than an orange in her left side, high up, which she took to be the head of a child. This went on increasing in size, at first markedly in a downward direction, and subsequently from side to side, till one month before admission, when she was suddenly seized with pains at night, which she took for labour pains. During this time she menstruated regularly.

Physical Examination.—The abdomen is distended uniformly to about the size of a seven months' pregnancy. Swelling is unusually prominent in the region of the umbilicus. Measurement round umbilicus = 36½ inches. Tumour is smooth in outline. Percussion dulness in mesial line to within 2 inches of ensiform cartilage. Flanks clear. Everywhere else is dull. Fluid thrill and fluctuation easily felt. *P.V.*—Vaginal portion of cervix hypertrophied. Uterus movable, displaced towards left and backwards. Sound enters 2¾ inches upwards and forwards.

On 16th September 1884 operation of laparotomy was performed. On making abdominal incision there was more venous hæmorrhage than is usual. On endeavouring to reach the peritoneum it was found absolutely adherent to the sac of the cyst, and it was impossible to separate them without wounding the latter. From the cyst a quantity of fluid having the appearance of a strong infusion of logwood escaped. This was partly aspirated and partly welled forth spontaneously. The sac of the tumour was excessively fragile, so that no forceps could hold it. On emptying the tumour the cyst wall was found *absolutely* adherent in *all* parts to the subjacent structures. It passed rather deeply into the pelvis, increasing markedly the depth and size of the utero-vesical *cul de sac.* The uterus was fixed between the position of retroversion and the normal, lying upon the left side of the anterior wall of the sacrum. The tumour was now slowly separated from the anterior wall of the abdomen and from the viscera, to which it became attached on being reflected high up from the anterior wall in all directions. Inferiorly, also, it was peeled off from the anterior *cul de sac* between uterus and bladder. This process was continued from above downwards and from side to side until it was separated from the subjacent tissues. While doing so it was noticed that the peritoneal coat of a viscus on the left of the spinal column was torn for nearly an inch, exposing the muscular wall. This rent was carefully brought together by catgut sutures, and further attempts to remove the sac were desisted from, as it was seen to be firmly attached to the front of the abdominal column anteriorly over the aorta and vena cava. The loose portions of the tumour were now tied and removed by scissors; an elongated area, about the size in all of the palm of the hand, lying over the vessels as above described being left untouched. No trace of anything like a pedicle connecting the tumour with either broad ligament could be found. The abdomen was now carefully sponged dry, when it was found that superiorly and laterally there was adhesive peritonitis in all directions beyond the point where the sac was found to be reflected from the anterior wall as above described. The wound was brought together in the usual manner, only a drainage tube was put in the lower angle of the wound. The tumour with its contents weighed 12 lbs. Microscopically the fluid contained fibrine, blood cells, and detritus, and had a sp. gr. of 1035.

For the following description of the sac of the tumour I am indebted to the kindness of Professor Greenfield:—

"The wall of the larger cyst was lined with a very regular layer of columnar epithelium, exactly resembling that of an ordinary proliferous ovarian cyst. The cells were covered with a layer of coagulated fibrine apparently mixed with blood. At some points the epithelial layer was separated from the subjacent structures by a delicately fibrillated network of coagulated fibrine. The cyst wall was composed of a loose fibrous network, with but few cells, except ordinary connective tissue corpuscles. There were comparatively few capillaries. In the substance of the wall there were contained—1st, Other cysts having all the characters of the larger cysts, lined with typical large columnar epithelium, and containing similar coagulated fibrine, mixed with blood, partly forming a laminated structure on the epithelium, and partly a loose network in the cavity. 2nd, Rounded or ovoid spaces of various sizes, containing only a fibrinous network, devoid of epithelial lining, and looking at first sight like distended lymphatics. In some of these a few rounded cells like altered epithelial cells could be seen, and in others a flattened epithelial lining. Around most of these spaces the fibrous tissue was denser and circularly arranged in such a manner as to form a definite wall. From a comparison of a large number of those minute cavities I am inclined to regard them as abortive cysts, *i.e.*, cysts into which hæmorrhage or fibrinous exudation had occurred at an early period of their development, or transitional forms in all degrees between spaces containing only fibrinous coagula and distinct cysts lined by columnar epithelium were observed. The only character differentiating this from an ovarian cyst is the constancy of the fibrinous or sanguineous exudation in all the cysts, large or small."

On the evening of the operation the patient's temperature rose to 102°·2. The cavity was washed out twice. Brandy and champagne were given. During the next three days the cavity was washed out twice daily. On the ninth day after the operation the deep stitches were removed; some discharge, smelling badly, proceeded from the cavity. Iodoform dressing. On twelfth day a glass drainage tube was again introduced. On fourteenth day the discharge was more purulent. On the fifteenth day the glass drainage tube was changed for an elastic one. On the eighteenth day (October 3rd) the discharge was still considerable, with putrid smell.

7th October.—Discharge is decreasing in quantity.

10th October.—Cavity washed out with sulphurous acid 1-10.

13th October.—Temp. 101°·4. Passed a restless night. Cavity thoroughly washed out; a quantity of putrid membranous slough was squeezed out through the wound.

14th October.—Temp. normal.

18th October.—Wound still washed out; very little discharge or smell; sac greatly contracted.

22nd October.—Drainage tube removed in the hope that the cavity would heal up.

23rd October.—Examined by Dr Macdonald.

P.V.—Uterus has risen considerably in position; tolerably movable. Some thickening can be felt at the brim by the sides of the abdominal wound. Sound enters 2¾ inches upwards and forwards without pain. Wound entirely healed.

26th October.—Patient was to have gone home to-day, but the temperature rose to 102°. Wound was reopened, when a quantity of pus escaped. Drainage tube reintroduced.

31st October.—Cavity is being washed out with sulphurous acid daily.

22nd November.—The wound is now closed. The uterus is in normal position—can be felt projecting against the anterior abdominal wall about an inch above the lower edge of the cicatrix. There is some contraction of the left broad ligament, but no tumour and no tenderness. Behind in the fold of Douglas all is clear; the right broad ligament is perfectly clear, and not contracted. No fulness whatever is felt behind the incision. The contraction in the left broad ligament appears to be the remains of an old cervical tear. The abdomen is now resonant all over. Patient dismissed to-day.

26th February 1885.—To-day Dr Linton of Grangemouth reports that Mrs W. is well and has put on flesh. Since leaving hospital the wound broke out afresh, discharging a considerable quantity of pus. There is now a small sinus in the lower part of the abdomen, which continues to discharge a small quantity of pus, but which causes no special inconvenience, and does not prevent her attending to her household duties.

Such is the history of a case of rare interest. It was diagnosed by me before operation as a typical ovarian cyst. It was impossible from the tension of the abdominal walls to determine whether the tumour was or was not connected with the uterus by a pedicle. But if we trusted to this as a necessary element in the diagnosis of abdominal tumours, many of them would be impossible to diagnose. But the ordinary symptoms of encysted fluid in the peritoneum were so well developed, that, relying on them, I demonstrated the case to the class as an ovarian tumour. I was therefore not a little surprised to find that no trace of a pedicle could be elicited. I was also very much taken aback at the condition of universal adhesion of the tumour to the peritoneum, both visceral and parietal. Such a condition has never come across my experience in dealing with ovarian tumours. In every direction the tumour was absolutely adherent to its surroundings, whilst into its cavity numerous cysts filled with sanguineous contents projected. I have only met with one other similar case, in which a uniformly adherent cyst was found to take its origin in the mesentery. In this case I was successful in removing the entire cyst, but the patient died suddenly twelve hours after operation, apparently from pulmonary embolism. In this case the ovaries and uterus were discovered to be free from any connexion with the tumour. As the broad ligaments were both flattened downwards and backwards by the extension of the tumour in the downward direction, it was impossible to make out in the hurry of its removal in what condition the ovaries were. I was glad to get the operation finished. But we could not make out anything having the slightest appearance to a pedicle or any greater adhesion of the sac to the broad ligaments than to any other part of its circumference.

The tumour was especially firmly adherent to the lower layer of the mesentery and to the vessels posteriorly. Moreover, from the history of the case it would appear that the tumour originated high up and grew downwards towards the pelvis. This is noted by Pean[1] in reference to three cases of somewhat similar tumours which he operated upon like me under the idea that he had got to deal with ovarian tumours. It was further to be observed, both in this case and in the other case to which I have already referred, that the tumour projected unusually far forwards in the region of the umbilicus, in that respect suggesting the appearance of a much anteverted pregnant uterus rather than of an ovarian tumour.

Considering Pean's cases, and collating them with my previous case, I was inclined to regard this tumour as most probably arising in connexion with the mesentery. The report of Professor Greenfield rather tends to the opinion that after all it may have been of ovarian origin. But if so, how it was related to the ovary, and under what conditions it came to assume the extraordinarily sanguineous character, and to have been so universally adherent, appear to me a complete mystery.

I record the case, however, in the hope that it may lead other operators to call attention to similar cases in their experience.

It is to be borne in mind, however, that whether this tumour was mesenteric in origin or otherwise, that the mesentery is, as pointed out by Pean, and as proved by at least my first case, if not by this, occasionally the site of large cysts, which simulate ovarian tumours, and have to be borne in mind in forming a diagnosis. If seen early these can be diagnosed by reference to their origin on the left side of the spine in the umbilical region, and their tendency to develop downwards instead of upwards, as also by the prominent way in which they cause the abdomen to project in the region of the umbilicus. At first with such tumours there is resonance all round as well as at the sides. This I saw specially marked in a solid tumour of the mesentery, for which I made an exploratory incision about eighteen months ago in the Infirmary.

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[1] *Tumeurs de l'Abdomen et du Bassin*, p. 1103.

These characters ought to enable us to make a diagnosis in the early part of their history. But once such tumours crowd down into the pelvic inlet, I know of nothing short of abdominal section, except a careful study of their history and growth, that could help us in forming a decided opinion.

The universal condition of adhesion in the present instance made the outlook for the patient exceedingly unfavourable. But the tendency in the tumour to set up inflammatory adhesions on all sides was undoubtedly in favour of a successful issue. The adhesion of the bowel to the front wall at the point of reflection of the tumour superiorly converted the cavity from which the tumour was removed into a nearly complete extra-peritoneal cavity, and this being freely drained prevented absorption of putrid materials. All the parts of the sac left in front of the bloodvessels sloughed out and were discharged. The abdomen of the patient after operation was of a very peculiar appearance, as the adhesions prevented the abdominal viscera from passing into the space rendered empty by removal of the tumour. The pressure of the external air depressed the abdominal walls and made the abdominal surface assume the appearance of an inverted cone, which appearance, however, was gradually undone by the bowels working their way back to their normal positions. I may here state I found sulphurous acid a distinctly more effective means for preventing the smell of the contents of the abdominal cavity than carbolic acid, as well as much less irritating. The case further seems to teach that the most unpromising abdominal tumours may lead to satisfactory results, provided free drainage is safely secured.

IV. *Laparotomy for Removal of Uterine Appendages.*

CASE VIII.—Mrs B., æt. 35, married sixteen years; no children. She thinks she had a miscarriage seven years ago. Admitted 21st April 1884.

Patient complains of pain in the left groin at each period, which has tormented her for ten years, and which she is unable to trace to any attack of fever. There is no evidence of patient's having suffered from gonorrhœa or syphilis at any time. The pain occurs only at the periods, continues for about thirty-six hours at a time, and is accompanied by absolute prostration and inability to eat, sleep, or work. About two days after there is an attack of sickness, lasting about a day. During the attack of pain the left leg is usually enfeebled. For the last six months the menstrual flow has been scanty, but the pains have become intensified. There is much pain on coition.

Physical Examination.—Vagina short and wide. Uterus very tender and retroverted. The right ovary is hard and excessively tender, and somewhat prolapsed. The left ovary is felt with some difficulty in the anterior part of the left lateral fornix. In every respect other than her genital system the patient exhibits the appearance of fair though not robust health.

Operation on the 24th of May. The operation lasted 40 minutes. Some trouble was experienced in getting hold of the ovaries, owing to the deep position of the uterus and the peculiar shortening of the Fallopian tubes, especially of that on the left side. The left ovary was first brought to the surface, and its attachment to the broad ligament secured by a two-linked silk ligature, the tying of the Staffordshire knot being prevented by the needle accidentally cutting through the ligature. The ovary and attached tube were then removed. There was no bleeding. The right ovary and attached tube were similarly treated, only that its attachment to the broad ligament was secured by a Staffordshire knot. The pelvis was then cleansed by sponge of any drops of blood that had fallen into it. The pedicles being found perfectly dry, the ligatures were shortened, and the pedicles dropped into the abdomen. The abdominal wound was then closed, and the wound dressed with protective and salicylic wool.

The patient made an excellent recovery, and was dismissed on 25th June 1884, looking well, and free from pain of any kind.

8th October 1884.—Patient returned to report herself. Has been quite well and free from pain ever since the operation. Sexual feeling retained, only the act now entirely free from pain.

Description of Structures removed.—Structures removed from right side consisted of ovary, to the outer edge of which was adherent what was evidently a portion of the tube next the fimbriated end. The fimbriated end itself arched over the upper border of the ovary like a hood, but was not adherent to it. The ovary was of a palish-yellow colour, with a tolerably smooth surface, under which there projected several small cysts, varying in size from that of a millet seed to that of a pea. The ovary measured 1 × ¾ × ½ in. The adherent tubal portion when removed measured 1¼ in., and was slightly distended. On cutting into it there was found to be three tubular openings in it, each containing a small quantity of serum. The parts removed from the left side consisted of the ovary, to the outer side of which there was firmly adherent a mass, consisting apparently of the end of the Fallopian tube. The ovary resembled that of the right side, measured 1 × ¾ × ½ in. The adherent mass, when viewed from above, presented a horseshoe-shaped contour, with, in the centre, a rounded projecting portion, the whole having the appearance of being formed of two convolutions of the Fallopian tube. The horseshoe-shaped portion, which formed the outer limit of the mass, measured 1⅛ in. in both directions, thickness ¾ in. On measuring the length of what appeared to be the convoluted Fallopian tube it was found to be not less than 2¾ inches. Both ovaries were cystic.

This case has been already reported by me as part of a clinical lecture published in the *Edinburgh Medical Journal* for last year. It is satisfactory to be able to state that the operation was completely successful in removing the patient's distress. She has never menstruated.

Case IX.—Mrs M., æt. 32, residing in Edinburgh, was admitted on 5th September 1884, complaining of an intense pain in her right side. Patient has been married five years, and has had no children. Present illness commenced four years ago. The pain was very severe, especially during defæcation and micturition. At other times, whether at rest or moving about, she was troubled with a bearing-down feeling. All along, patient says, she has felt a lump in her right side, and it seemed to be pressing down upon something. Nothing of this character has been felt in the left side, but a sharp lancinating pain has occasionally been present. A pain in back, usually worse at night, has also distressed her. Patient says her urine has been tinted, as if it contained blood. She has never enjoyed good health since her marriage. Dysmenorrhœa and dyspareunia are also complained of. Patient says she has aborted three times at the third month.

Physical Examination.—Right ovary somewhat prolapsed, distinctly enlarged, very tender. No distension to be made out in the broad ligament. Left ovary also enlarged, somewhat prolapsed, and excessively tender. Uterus is moderately retroverted, appears not to be movable, increased in size. Sound enters without pain 2¾ inches upwards and forwards.

Treatment.—On 13th September operation of abdominal section performed. Some difficulty was experienced in entering the abdominal cavity from the unusual amount of subperitoneal fat which simulated the omentum. It was found rather difficult to reach the ovaries on account of extensive adhesions, which were found to bind down the uterus and ovaries to the floor of the pelvis, more particularly the right ovary. The left ovary was ultimately brought to the surface. It was found to have an oblong oval cyst, 1½ inches long by 1 inch in perpendicular depth, growing by a broad attachment to its free border. The tube was not enlarged nor attached to this ovary. The pedicle was fastened with a Staffordshire knot, and the ovary, with its attached cyst, removed, and the pedicle dropped. After considerable trouble the adhesions fixing the right ovary were divided, and it, along with a much dilated and thickened attached Fallopian tube, were with great difficulty brought within reach. During this manipulation an extravasation of blood in the tissue of the ovary burst, giving exit to a clot about the size of a bean. The mass was ligatured, and both the ovary and attached tube removed with scissors. There was no hæmorrhage. The abdominal wound was secured in the usual manner. The operation lasted 40 minutes.

Patient made a good recovery. She passed wind on the third day. Deep stitches were removed on the fifth day. Bowels moved after castor-oil on the seventh day after operation. Dismissed 9th October 1884.

12th February 1885.—Patient returned to report herself. She is well, and is entirely free from pain. There is no tenderness or fulness in the region of the ovaries. Sexual feeling remains unaltered. This case also is a complete success.

CASE X.—Mrs W., æt. 30, residing in Edinburgh, was admitted on the 20th August 1884, complaining of pain in hypogastrium and a sense of bearing down. Patient has been married ten years, and has had no children. Her present illness began a year after marriage, and has continued ever since. Dysmenorrhœa is present, and the pain is continuous during the intermenstrual period. About five years ago she was troubled with painful micturition, and ever since dyspareunia has been complained of. Her menstruation was painless before marriage.

Physical Examination.—Abdomen natural.

P.V.—Vaginal portion of cervix is chronically indurated and enlarged. Body of the uterus normal in position, size, and shape. Right ovary tender and somewhat increased in size, is movable, and somewhat prolapsed. To the left and slightly behind the uterus there is a soft, cystic-feeling mass about the size of a hen's egg, which is harder and firmer in its anterior portion, and which appears fixed, and is very tender.

On 6th October laparotomy performed. There was a little difficulty in entering the peritoneum on account of an unusual amount of subperitoneal fat. On reaching the uterus the ovary was found small and adherent to a dilated tube, and bound down by several firm adhesions. The left tube was found dilated into a considerable cyst. It was adherent to the left ovary, which was bound down to the ligament and uterus by firm and strong adhesions. After considerable difficulty the right ovary was brought to the bottom of the external wound and its pedicle secured in a Staffordshire knot, which isolated the ovary and the outer portion of the right Fallopian tube. These structures were now removed by scissors. There was no bleeding. An attempt was now made to grapple with the left tube and ovary. In order to obtain room the incision was extended upwards and the pelvis cleared of bowels, which latter were enveloped in warm moist towels. In endeavouring to isolate the left tube the cyst wall burst, and it discharged a considerable amount of thin fluid into the peritoneal cavity. This fluid was sponged out, and on re-examination it was found that the tubal cyst had completely collapsed. Whilst the adhesions attaching the left ovary were found to be more strong than was previously thought, it was therefore considered inadvisable to proceed further. The abdomen was sponged out, the bowels returned, and the wound brought together in the usual way. Patient made an excellent recovery. Flatus per rectum passed on the second day. Deep stitches were removed on the seventh day. On the eighth day bowels moved after castor-oil. Dismissed 6th November 1884, feeling well.

I have delayed my observations on these cases so as to include them all in one note. It will be seen that each of the cases presented points of extreme divergence, whilst at the same time they exhibited much in common. The symptoms, indeed, were those of great distress and pain gradually wearing out the strength of the patients. There was evidence in all these cases that there were gross lesions affecting, if not the tubes also, the ovaries certainly. It was plain, therefore, that removal of the diseased structures was not removal of the normal ovaries. That operation is seldom warrantable. It is indeed uncertain whether, if we are satisfied the ovaries are healthy, it is ever warrantable, except in a case of high pelvic deformity, to prevent subsequent conception. It is never otherwise proposed, so far as I know, except in the hope to remove some specially severe reflex result of ovarian origin, such as insanity or epilepsy. The determination of an accurate diagnosis is under such circumstances exceedingly difficult. The nervous lesion is undoubtedly there. Whether it is centred in the ovary or not must always be a matter of opinion. The results from such operations in the hands of Mr Lawson Tait are affirmed by himself to be far from encouraging. But while normal ovariotomy is seldom warranted, and, so far as I know, seldom proposed, the question is very different when we have got to deal with distinctly diseased appendages. In some cases, doubtless, there is cirrhotic disease of the ovaries, giving rise to extreme distress without producing any demonstrable gross lesion detectible by ordinary clinical examination. But in the majority of cases presenting those distressing symptoms there is demonstrable ovarian or tubal disease to be made out. It is most common, as Lawson Tait points out, to find the tubes adherent to the ovaries by the fimbriated extremities. When that takes place dilatation of the tubes, apparently the result of obliterative catarrh, takes place, the catarrhal condition producing such swelling of the mucous membrane of the part of the tube next the uterus as to obliterate its lumen, whilst the adhesion of the trumpet-shaped extremity prevents escape of fluid at the ovarian end. This fluid, according to the degree or nature of the catarrh, may either be clear fluid, muddy coloured fluid, or pus. I have seen these three varieties, but there are no doubt others. The changes in the ovaries I have always found to be a combination of cirrhosis with cystic degeneration. I have always found decidedly more structural change after operation than I had previously expected. Though the change in the tubes is normally of the nature of an obliterating catarrh, other changes of a different nature are found. It will be noticed that in Mrs B.'s case there was no dilatation—the reason apparently being because the fimbriated extremity was not blocked. But the changes were cystic disease of the ovaries and a peculiar folding up or rolling up of the tubes apparently due to the action of adhesive peritonitis on their peritoneal coat. In Mrs M.'s case the left ovary was free and the tube healthy; but the ovary contained a large cyst. On the other hand, the tube was attached to the right ovary and was dilated and thickened. In Mrs W.'s case there was evidence of extensive perioophoritis. The right tube was adherent and dilated, whilst its corresponding ovary was small. The left tube was converted into a large cyst adherent to the left ovary, which again was firmly bound down to the ligament and uterus by powerful bands, the result of adhesive inflammation. In this case manifestly the result was due to an obliterating catarrh; the ovaries had partaken freely in the tubal inflammation. The painful micturition from which she suffered five years previously, and which had been followed ever after by dyspareunia, was, I do not in the least doubt, caused by a gonorrhœa which extended upwards, and led ultimately to the pathological condition found at the operation. I regret exceedingly that I had not the courage to complete the operation. With additional experience since gained, and with better skill in the use of sponges in packing aside the intestines, as also with the aid of the electric lamp, I feel certain I could now safely finish such an operation. At any rate the free bursting of the sac formed by the dilated tube relieved tension, and the patient was dismissed feeling quite well. We have not yet heard from her, so that we are unable to state whether the improvement will be permanent.

I have performed several of these operations since November, and will be able to record the cases by-and-by. The main secret of successful removal of these cysts when deeply placed does not consist in removal of the intestines from the pelvis, as we did, which is a riskful expedient and gives little help, but in carefully packing sponges round the cyst so as to expose it to view and keep the bowels out of the way, whilst a good light, such as an electric lamp, is made to play upon the parts and expose any bleeding points. We must also be able to ligature the parts in position before removal, as separation of non-ligatured adhesions is apt to lead to troublesome bleeding, which is difficult to correct completely.

The later operations are too recent to say anything regarding the benefit to be expected. But my three first operations have been completely successful. These are the first of the three recorded here, and another previously reported. In all these three complete relief of symptoms, with arrest of menstruation, have resulted. In two of these the sexual appetite has remained unaltered. In one of them sexual desire has been abrogated. In one of them, the first I recorded, there was some pain on the left side for some months after operation, but, as has happened in Lawson Tait's experience, this has gone completely away. The cause of such pain is clearly some change in the cicatrix, which disappears after a time. I therefore confess myself a convert to the opinions of Mr Lawson Tait on this subject, "impune it whoso listeth." I have seen enough to satisfy me that in a considerable number of otherwise incurable and excessively distressing cases complete relief from suffering and return to usefulness is afforded by the removal of the uterine appendages. Ovarian neurosis I believe will soon be largely a thing of the past, along with ovarian irritation and other terms which have been used to serve as a cloak for our ignorance. The ovary is not such a terribly wilful organ as to lead to such distressing results when it is healthy and functioning normally. Advance in exactness of diagnosis will, I doubt not, enable us to discriminate with much greater precision between the various degrees and varieties of ovarian and tubal changes. The operation is, as I have found out, practically a very difficult one, much more so as a rule than ordinary ovariotomy; but it is not a dangerous one if care is taken not to introduce septic matter into the peritoneum. There is, of course, great danger of pushing the operation too far and bringing it into discredit through its unnecessary application. That is an objection which can be urged with some force against every improvement, and can only be avoided by a careful examination of the cases and a conscientious weighing of the pros and cons for operation in the individual cases. Those that present the enlarged ovaries or tubes high placed and movable are much more easily operated on than those in which the diseased parts lie deeply in the pelvic cavity and are fixed. But I do not believe we ought to delay operating until the patient is reduced to a state of extreme debility by pain and distress, although this view finds favour with some excellent authorities. I am satisfied, so soon as we are certain that the ovaries or tubes are distinctly diseased and are not likely to yield to our ordinary methods of treatment, which are confessedly very unsatisfactory, we are bound to at least inform our patient of the possibility of relieving her by operation. I have always been, as I have said above, surprised to find the pathological changes disclosed by the operation much more pronounced than I had previously expected. I think we are bound to give the patient a chance of relief before undergoing years of torment and exhaustion. It is idle to argue that you are depriving the woman of her reproductive powers. In almost every case you will find, when you proceed with the operation, that natural causes have already completely destroyed that function. The ovaries and tubes will be found already incapable of taking their part in the reproductive function, and are merely sources of distress and discomfort to the unfortunate patients.

There are many points of interest in regard to the diagnosis of these conditions, but these I will postpone until a future occasion, as I feel I have already trespassed far too much on your indulgence.

Appended is a synoptical table of the ten cases operated upon, with the results.

No.	Name.	Age.	Medical Attendant.	Disease.	Date of Operation.	Result.
1	Mrs D.	52	Dr Thomas, Selkirk	Ovarian Cystoma	28th June	Recovery.
2	M. W.	57	Dr Thomson, Musselburgh	Ovarian Cystoma	10th July	Recovery.
3	Mrs B.	44	Dr Wilson, Mid Calder	Ovarian Cystoma	10th Sept.	Recovery.
4	Mrs D.	58	Infirmary	Ovarian Cystoma	21st Oct.	Recovery.
5	Mrs M.	52	Infirmary	Ovarian Sarcoma	8th Oct.	Recovery.
6	Mrs H.	46	Infirmary	Parovarian Cyst	18th Sept.	Recovery.
7	Mrs B.	35	Dr Spence, Burntisland	Disease of Uterine Appendages	24th May	Recovery.
8	Mrs M'M.	32	Infirmary	... ...	13th Sept.	Recovery.
9	Mrs W.	30	Infirmary	... ...	6th Oct.	Recovery.
10	Mrs W.	42	Dr Linton, Grangemouth	Cyst of Peritoneum	16th Sept.	Recovery.

II.—SOME PRACTICAL POINTS WITH REGARD TO THE MEMBRANES IN THE THIRD STAGE OF LABOUR.

By A. H. Freeland Barbour, M.D., F.R.C.P. Ed., Assistant to the Professor of Midwifery and the Diseases of Women.

(*Read before the Edinburgh Obstetrical Society, 11th March* 1885.)

Scientific treatment must rest on an anatomical basis. The more accurate and precise our knowledge of anatomy is, the more definite will our principles of treatment be. In this paper we shall consider some practical points with regard to the membranes in the third stage, based on the anatomical facts brought forward in a former paper.[1]

Before doing so let us glance briefly at the changes which occur during labour in the anatomical relations of the membranes. At the end of pregnancy we have the uterine cavity lined with the membranes in the following order, from without inwards:—Decidua, chorion and amnion containing the liquor amnii, and fœtus. To facilitate description we give some rough diagrams, but it must be remembered that these are only intended to make our meaning clear; for anatomical facts we must refer to the plates in the paper already mentioned. Fig. 1 shows the general relations of the membranes to the uterine cavity and to the placenta before labour has begun. Most external is the muscular wall; resting immediately

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[1] "The Anatomy and Relations of the Uterus during the Third Stage of Labour and the First Days of the Puerperium," *Edinburgh Medical Journal*, September and October 1884.

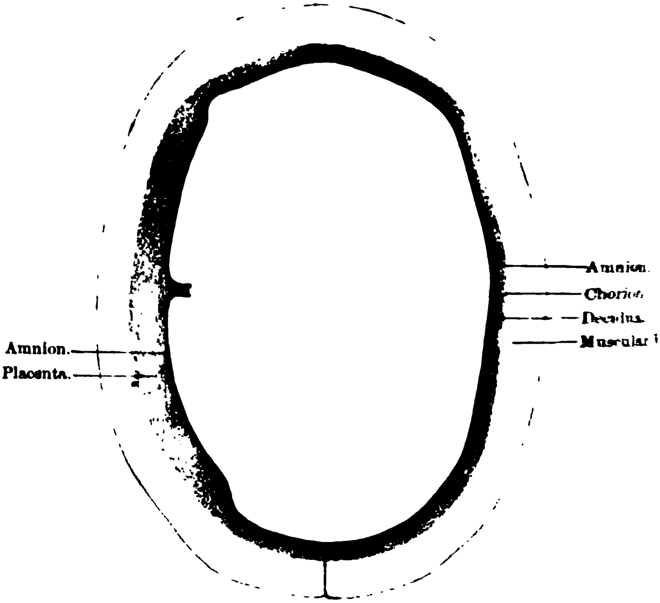

Fig. 1.

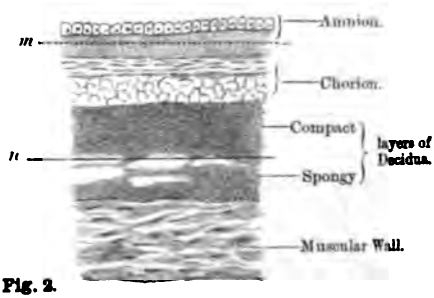

Fig. 2.

RELATION OF MEMBRANES TO UTERINE WALL: at end of Pregnancy, Figs. 1 and 2 (dia

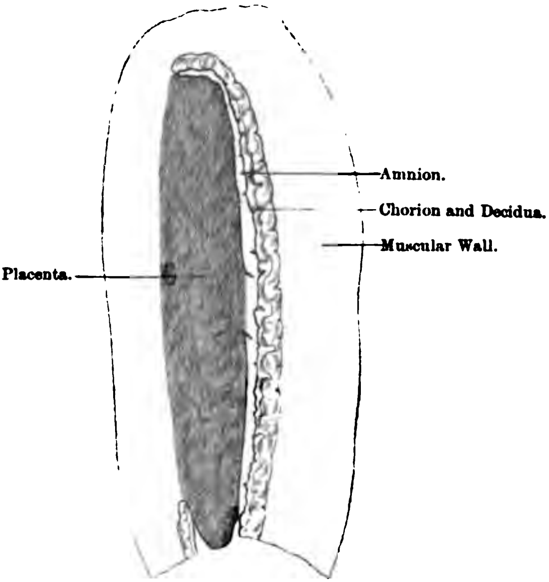

Fig. 3.

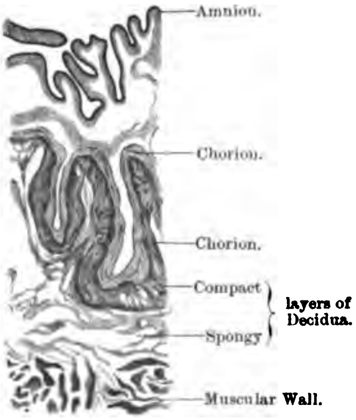

Fig. 4.

W. & A. K. [illegible] Edinburgh & London

of second Stage of Labour, Figs. 3 and 4 (based on anatomical preparations).

n it is the decidua; within this is the chorion, and finally the mnion distended by the liquor amnii. On one part of the wall he chorion and decidua blend in the placenta. The minute struc- ure of these layers is indicated in Fig. 2. The amnion consists f a single layer of columnar epithelial cells resting on a delicate onnective tissue, which unites it to the chorion. The chorion is omposed of a band of compressed fibrillated tissue below which is a more cellular layer. The decidua consists of the vera and reflexa, which have become practically one membrane. It appears as if made up of two zones—a superficial compact and a deeper spongy zone. The appearance of two zones or layers in it is due to the changes which the glands of the uterine mucous membrane undergo during pregnancy. The ducts of the gland become obliterated by pressure, and hence the membrane has a compact appearance above; the lower portions of them hypertrophy, and appear as epithelium-lined spaces in the decidua, giving it a spongy appearance on section.

So much for the relation of the membranes before labour has begun. What are the changes which occur during labour? Or the question might be thus stated: Here is a bag containing water (for we may leave the fœtus out of account); the wall of this bag consists of several layers; what will happen if you tap the bag? how will these layers behave? Their behaviour will depend on the nature of the layer itself, and of its union with the adjacent layers. With regard to the nature of the individual layers, the amnion is the thinnest, strongest, and most elastic of the three membranes; the chorion is thicker, but not so strong; the decidua, although the thickest, is friable and without much cohesion between its parts. The muscular wall possesses contractility. As regards their union, the amnion is united to the chorion by a delicate, gelatinous connective tissue, which forms a plane of weakness in the cohesion of the membranes, indicated by the dotted line *m* in Fig. 2; the chorion is intimately united to the decidua, being first rooted in it by the primitive villi, after which the two membranes become so blended that it is difficult to trace a line of demarcation under the microscope; the decidua is united to the muscular wall just as the mucous membrane of the unimpregnated uterus is, there being no muscularis mucosæ. The peculiar development of the glands produces a plane of weakness in the spongy portion of the decidua indicated by the line *n* in Fig. 2. The persistence of these glands in the deepest part of the decidua throughout pregnancy, and the fact that this line of weakness runs so as to leave after delivery a layer of the decidua with portions of the spaces lining the muscular wall, are significant with regard to the regeneration of the mucous membrane. These spaces serve as storehouses of epithelium (for we cannot attribute any secreting function to them during gestation), from which the epithelium is developed in the puerperium to line the interior of the uterus.

The condition after the bag is tapped and its contents withdrawn is shown in Fig. 3 and Fig. 4. The muscular wall contracts and becomes, of course, thicker. The decidua and chorion behave practically as one membrane, and are thrown into a series of more or less regular wavy folds, and become detached at the crests of the waves from the uterine wall, the separation taking place in the spongy layer, *i.e.*, along the line of weakness *n* in Fig. 2. The amnion separates itself from the chorion along the line *m*, and throws itself into smaller papillary folds. The placenta does not separate from the uterine wall.

The partial separation of the decidua and chorion is evidently due to the diminution in area of the inner surface of the uterine wall; the muscular wall contracts, and the membranes, not possessing contractility, are crumpled up. The separation of the amnion from the chorion can, I think, only be explained by a difference in elasticity between the membranes. The plane of separation of the amnion and chorion is indicated by a dotted line, because it is not of great practical importance, and I do not know whether it is a constant occurrence. As the folds are microscopic, they might quite well be present when these membranes come away, apparently in contact throughout. The important plane of separation is indicated by the line *n*. All above this line should come away in a case of normal labour; that below it remains to produce the new mucous membrane. Why the placenta does not separate is not evident. In Braune's plates and in specimens in the Obstetrical Museum I have been struck with the thinness of the placenta while *in situ* during pregnancy. Its spongy texture may allow of its site diminishing without its sliding off.

The foregoing anatomical facts are of great practical importance. As we follow them out we find them branching in various directions; and keeping hold of them, we have a clue to a great many clinical facts. In this paper we shall refer to three of them.

1. With regard to *the retention of portions of membranes in the third stage.* They show us the value of examining carefully the membranes as well as the placenta after delivery. While the importance of examining the placenta is fully recognised, the examination of the membranes has not received the attention it deserves. And this for two reasons. The danger of the retention of a portion of placenta in producing post-partum hæmorrhage and septicæmia is an ascertained fact; while the relation of retention of portions of membranes to endometritis is not generally recognised, although Küstner's investigations give us an anatomical basis for it. A more obvious reason is that in studying the expelled membranes by themselves we were reading a book torn through the middle, which was unintelligible, not to say uninteresting; but in the series of preparations described in my former paper, we have the book complete, which tells its story in a lucid and suggestive manner.

In examining the membranes we might proceed as follows,—(*a*.) Note the seat of rupture (as indicating the situation of the placenta in the uterus), and whether the amnion and chorion have ruptured at the same point. It would be interesting to know whether with a central rupture of the membranes, *i.e.*, with an equal length of membranes all round the placenta, pointing to a fundal insertion, there was a retro-uterine hæmatoma as suggested in my former paper. (*b*.) Examine carefully round the tear in the amnion to see whether all the chorion is present; when the two membranes have been delivered in contact with each other we can easily detect a deficiency of the chorion. (*c*.) Notice also whether the chorion is present over all the rest of the amnion, and whether the decidua is of uniform thickness throughout. The decidua appears as a pale-red areolar tissue of a dull lustre, which contrasts with the glistening chorion. The best way to tell its thickness is to hold the chorion up to the light, or to scrape off the decidua with the finger nail.

I said that we should examine the membranes, specially round the seat of rupture, to see whether the chorion was present, because in three cases in which I have found the membranes adherent they felt as if they were adherent in the lower part of the uterus. In a fourth case I could demonstrate this conclusively. It was a case of labour in a patient with a sub-peritoneal fibroid of the uterus, whom I saw along with Dr Craig. We expressed the placenta by Credé's method about ten minutes after the birth of the child. The membranes were retained, and, on being twisted up, tore through just at the os. I passed my fingers into the uterus and detached carefully what was retained. It was a piece of chorion with decidua, about six inches square, and showing in its centre a rent representing the rupture at the os.

But some one will say, Supposing I find that a portion of decidua is absent, you would not have me pass the hand into the uterus to remove it. Certainly not, because in averting the probability of endometritis you might expose the patient to the risk of introducing septic matter into the uterus, and after the membranes are torn through you lose the guide to the adherent portion. A routine practice of systematic and careful examination of the membranes will, however, have these good results: it will lead us in the first instance to take more care in the delivery of the membranes; it will also influence our prognosis as to the ultimate return of the interior of the uterus to a healthy condition.

2. With regard to *the mode of delivery of the membranes*, in the management of the third stage, the following points are of practical importance. As the membranes are only gradually separated, the placenta should not be expressed immediately after the birth of the child, but after an interval of about half an hour. When it is expressed out of the uterus it may be arrested by its own bulk in the cervix or vagina. The lax and

folded condition of the cervix (*v.* Plate V. in the paper referred to favours its arrest here, and the fact that the vagina at once returns to its normal direction of being parallel to the pelvic brim and at an angle with the uterine axis (*v.* same Plate) explains its arrest here. Supra-pubic palpation will tell us whether the placenta has left the uterus. If it be arrested in the vagina, it will slip out on hooking back the perineum; if in the cervix, we should lay the hand, not on the fundus uteri as in the Credé method, but on the lower uterine segment (in which we can generally feel the placenta lying), and express the placenta. But the arrest may be due to retention of the membranes, and here more care is required. The ordinary method of twisting them into a rope is a good procedure, provided we at the same time pass the fingers into the vagina to make sure that this twisting does not make them tear through outside the cervix. If we feel that they are tearing through it is best to run the finger along the membranes into the uterus and detach them with the nail. The advantage of this procedure was forcibly impressed on me by a recent case of retained placenta. After detaching a corner where it was adherent, it glided into the vagina, but was arrested at the vulva. The cause of its arrest was the membranes, and as I had already passed my hand into the uterus, I did so a second time without twisting them into a rope; I ran my finger along them to the fundus, and felt in one Fallopian tube angle of the uterus a body the size of a small walnut, which I detached carefully. It was a succenturiate placenta—placed 5 inches from the main placental mass—and the least force would have torn through the delicate chorion and left this inside the uterus.

3. With regard to the *cause of the hæmorrhage in partial placenta prævia*, the plane of weakness between the amnion and chorion is of interest. Schrœder explains the separation of the placenta to be due to the fact that the placenta is kept taut, as it were, on the unruptured bag of the amnion. Hence, as the uterine wall retracts off the ovum, the placental site must be stripped off the placenta, and hæmorrhage occurs; if you rupture the membranes, you allow the placenta to retract with the uterine wall, and there is no hæmorrhage. A study of these preparations made me doubt these facts, because—(1) the chorion is a delicate membrane and tears readily; and (2) the connexion between the amnion and chorion is of such a slight nature that the difference in their elasticity is sufficient to separate them. A recent case of delayed rupture of the membranes allowed me to study this clinically. The bag of membranes did not rupture when the os was dilated, but came down and distended the vulva. As I could now see that this bag was formed of chorion and decidua, as well as presumably of amnion, I kept it entire until it formed a tumour the size of a fœtal head outside the vulva; as soon as the child's head slipped into this sac, I divided the latter carefully, and slipped it over the shoulders and body of the child.

My reason for preserving the bag of membranes after I saw their nature was to find out whether the chorion would follow the amniotic sac as it moved downwards, or whether it would tear, and leaving a cap on the lower pole of the ovum, become separated from the rest of the amnion. The latter was the condition found. We do not see, therefore, how Schrœder's explanation of the separation of the placenta and placenta prævia is supported, and prefer that of Matthews Duncan, who attributes it to the change in shape of the lower uterine segment.

III.—ON THE PREVENTION OF LYING-IN FEVER.

By **Vassily Sutugin**, M.D., Physician to the Court of H.M. the Emperor of Russia, Lecturer on Midwifery and Gynæcology at the Imperial Medico-Chirurgical Academy of St Petersburg. Translated from the Russian by **G. L. Carrick**, M.D.

(*Read before the Edinburgh Obstetrical Society*, 10*th December* 1884.)

(*Continued from page* 790.)

In order to attain the minimum of danger of wounding the parturient woman, it is necessary that the accoucheur, besides being experienced, should as much as possible limit the number of internal, and resort more frequently to external examinations. This latter point I have strongly insisted upon and demonstrated in my course of lectures on midwifery during the last eight years. It has been carried out with good results at the Maternity Barrack of the Ladies' Lazaretto Committee of St Petersburg, and is also strongly recommended by Prof. Rein.[1]

The arrest of hæmorrhage during and after labour is best attained by proper management of all the stages of parturition, particularly post-partum. According to the latest observations[2] recorded in medical literature, and according to my personal experience, the best is the expectant method of treating the placenta, *i.e.*, we should not remove it immediately after the birth of the child, but wait from one to two hours. This is the surest way to avoid tearing the membranes, while hæmorrhage under such treatment is of rare occurrence, during as well as after removal of the placenta. Expectant treatment should be active, if I might so express myself, but not in the direction of aimless explorations of the uterus; it should be active in regard to an examination every five minutes the quantity of blood escaping from the vagina, and in regard to watching the expulsion of the umbilical cord, which will obviate the necessity of introducing the hand for ascertaining the position of the placenta. Moreover, the state of the bladder should be attended to, and care taken to have it emptied before the afterbirth comes away. Any lacerations at the vaginal orifice should also be seen to in order that bleeding therefrom may at once be dealt with.

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[1] Frequent external examination places within one's reach the possibility of rectifying the position of the fœtus if abnormal, and very often removes the necessity of internal version, or greatly aids in accomplishing it, particularly in cases of placenta prævia. (This question has been fully ventilated in the St Petersburg Medical Society after a paper read on the subject by Dr Isain.)

[2] Dorn, "Zur Behandlung des Nachgeburtsheit," *Medicin Wochenschr.*, 1880, No. 41; Credé, *Archiv f. Gynækol.*, vol. xvii. p. 260; H. Abeg, *ibidem*, p. 372; D. Wilson, "The Proper Time to Remove the Placenta, etc.," *American Journal of Obstetrics*, 1882, p. 819; Ahlfeld, *Berichte und Arbeiten aus der Klinik zu Giessen*, 1883, p. 117.

According to Ahlfeld's observations, when the expectant method is resorted to in dealing with the placenta, hæmorrhages occur more frequently from the os and neck of the womb than from the latter being in an atonic state. While watching the uterus before the expulsion of the placenta, only the fundus, if atonic, should be gently rubbed. No attempts should be made to drag the placenta out, until sure that it is in the vagina (the patient then experiences a *bearing down* sensation). All lacerations of the perinæum, the labia, and beneath the clitoris, should, if they are the cause of hæmorrhage, be stitched. Some abrasions of the vagina and the neck of the uterus can easily be united by *serre fines* (for the cervix there are *parte-serre fines*). Intravaginal and uterine injections (cold or hot) should in cases of atony of the womb be applied when labour is over (but not while there is hæmorrhage at the orifice of the vagina or from the neck of the womb), and imperatively with disinfectants, but not the preparations of iron.

In cases of atonic uterus, ergot of rye should be administered internally, and ice applied to the abdomen. In slight cases kneading of the uterus is sufficient. The separation of the membranes, when torn, had best be left to nature,[1] rather than risk the introduction of the hand into the uterine cavity. The latter procedure will be necessary, however, if any portion of the placenta is left behind. When labour is over, the retrogressive changes in the womb should be watched, but there should be no resort to digital exploration until from the eighth to the tenth day; in maternities, just before the patient's departure; and in private practice, the day before she gets out of bed. The binder should be placed on the abdomen only after the uterine contraction has been watched during at least two hours. Pressure on the lower part of the abdomen is best effected by small clean cushions (kept ready for use), and filled with sand that has been subjected to high heat, and then washed with a 1 per cent. solution of corrosive sublimate.

To ensure the free escape of the lochia in natural labour no drainage tube should be introduced into the womb, and the accoucheur should confine himself to watching the uterine contractions; a temporary resort, on the second or third day, to massage, and the gradual raising of the body (by placing one and then two pillows under the patient's back), are very desirable. The half-sitting posture, if hæmorrhage has not been excessive, as recommended by Paterson,[1] is also well worthy of trial. Exploring the uterus, particularly of primiparæ, on the second or third day after labour, may lead to the inoculation of the patient by decomposing secretions at the orifice of the vagina, to lacerations at the neck of the uterus, etc., etc.

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[1] Toporski, "Das Sublimat als Desinficiens in der Geburtshülfe," *Centralblatt für Gynækol.*, 1883, No. 35.

Disinfection of the lying-in woman should be resorted to from the very commencement of labour, and during the whole of its continuance, in case of its becoming tedious. Just before labour begins a warm bath will be of service, and it will also be necessary to disinfect the outer genital organs and vagina. Thus the labiæ, pubis, and perinæum are washed with an antiseptic fluid, which is also injected into the vagina. The injection is repeated after tedious labour. Antiseptic tampons have been recommended, but they are more likely to prove harmful by acting as irritants, and are, perhaps, even themselves the cause of infection in some instances. They are much more safely replaced by a sprinkling of iodoform. According to the latest experiments of Tarnier and Koch, and the observations of Schede and Fritsch, the best of antiseptics is a solution of corrosive sublimate of a strength of 0·1 per cent. for external use, and a 0·05 per cent. for injections (a 0·1 per cent. solution causes a burning sensation in the vagina).[2] Carbolic acid of a strength from 2 to 5 per cent., as formerly employed, appears, according to Koch's researches, to be too weak; only a solution of 10 per cent. destroys germs, but then it also acts as an escharotic and irritant. Carbolic acid is expensive, moreover.[3] In Breisky's clinique chlorine water was used with success;[4] but this is also a comparatively expensive preparation, while its action on the respiratory track is very irritating.

Symptoms of mercurial poisoning after the use of corrosive sublimate have been observed very rarely (two cases in seven months) after surgical operations (Schede), and even in these instances the physiological action was confined to slight salivation and diarrhœa. Its certainty of action and cheapness speak highly in its favour, however. This preparation of mercury, moreover, does not produce that sensation of numbness in the operator's fingers which follows the employment of a strong solution of carbolic acid. There is only a slight roughness of the skin, while eczema has never been observed.

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[1] Paterson, *Centralb. f. Gynækol.*, 1883, No. 12, p. 196.

[2] Rob. Koch, "Ueber Desinfection," *Mittheilungen aus dem Kaiserliche Gesundheitsamte*, Berlin, 1881, p. 234; Olivier, "De l'emploi de sublimé corrosif en solution pendant l'accouchement," *Annales de Gynecolog.*, xvii., 1882, p. 338; Kümmel (Koch, Schede), *Verhandlungen der deutschen Gesellschaft fur Chirurgie*, Berlin, 1882, xi. Congress, p. 276; Toporski, *loc. cit.*

[3] Zweifel, *Zeitschrift f. Physiolog. Chemie*, vol. vi. The author has arrived at the conclusion that all disinfectants only arrest the development of spores, but do not kill them. His divergence of opinion from Koch's has not as yet been explained by any physiologist.

[4] Fischel, "Zur Therapie der puerpuralen Sepsis," *Archiv f. Gynækol.*, vol. xx. p. 1.

The hands, before making an examination, had best be anointed by glycerine or vaseline holding carbolic acid in solution (gr. xv. in a ℥j.); carbolic oil is not so good. In the absence of these, clean soap should be employed, the hands having previously been dipped in a $\frac{1}{10}$ per cent. solution of corrosive sublimate. After the completion of labour, it will be necessary again to wash the outer generative organs and the vaginal outlet with a disinfectant fluid, —the best being a 0·1 per cent. solution of corrosive sublimate.

Injections into the vagina should be resorted to after those cases of labour only where the hand has been frequently introduced into the passage during an operation, or for arresting hæmorrhage. Intrauterine syringing is allowable only where decomposition of the fœtus has already taken place, or where there is endometritis during parturition (tympanitis of the uterus), as also where hæmorrhage is the result of an atonic state of the womb (the fluid used may be warm or cold, according to the requirements of the case). Solutions of iron must be avoided, however. Fissures and slight abrasions in general of the outer part of the vagina should at once, after the completion of labour, be dusted over with iodoform powder. The use of small cotton-wadding plugs (bourdouettes), as proposed by Dr Mann,[1] should never be resorted to. The use of these small plugs irritates the patient, stretches the vagina, and prevents healing by first intention; whereas simple dusting of the parts (gr. xx. at a time), as employed by myself during the last twelve months, rather soothes than annoys the lying-in woman, and rapidly heals the abrasions. When healing by first intention failed, clean-looking wounds were always produced; œdema of the labiæ was seldom observed, and inflammation still more rarely. The use of tampons of iodoformized tarlatan, as proposed by Professor Rein, or of peat plugs dusted with iodoform, as used by Ahlfeld of Giessen,[2] can only do harm, for the same reason that bourdouettes do. Even in non-obstetric cases, decomposition of the plug takes place within six hours, while post-partum the process is still more rapid. When dusting with iodoform was first resorted to, a high temperature after labour was less frequently observed, and in most cases it lessened the frequency of post-partum infection. The iodoform dusting had best be done with an ivory spoon or a piece of paper, several times daily, during the first week. I order the dusting to be repeated after each washing of the outward parts, and also subsequent to micturition and defæcation. A week after labour, iodoform need only be used twice or thrice daily. The only drawback to iodoform is its price.

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[1] Mann, "Iodoform in Wochenbett," *Centralb. f. Gynækol.*, 1882, p. 10; Bager, *ibidem*, p. 153.

[2] L. Ahlfeld, "Beiträge und Arbeiten aus der geburtsh," Klinik. zu Giessen, 1883, p. 230.

Attempts to substitute naphthaline for it have failed in my practice, as, after its use, the excoriations bled more and assumed a dirty appearance; in some instances œdema of the vulva ensued, and even colpitis. The objections to solutions of carbolic acid in glycerine or the glycerine of borax is, that they have to be introduced on cotton wadding, which irritates the patient, and, besides, does not act so well as a disinfectant; œdema of the labiæ and colpitis are also more frequently observed. Lying-in women who have experienced the application of cotton-wadding dipped in a solution of carbolic acid, and also of dusting with iodoform, speak strongly in favour of the latter. Any symptoms of poisoning from iodoform in obstetric practice, even after applying it very largely, I have not been able to observe.

The use of antiseptics in the shape of spray during labour, as practised in Basle and London (Barnes)—and the early reputation of which has already considerably fallen even among surgeons—has never established itself in obstetric practice, where it is resorted to only for preliminary disinfection of the lying-in chamber, or where operative interference is deemed necessary, or where a considerable number of pupils are present in one ward. Strict Listerism is not applicable in midwifery, in consequence of the mobility of the soft coverings of the pelvis, the continued discharge of the lochia, and the close proximity of the outlets of the bladder and rectum. The sprinkling of iodoform over the vaginal orifice replaces Lister's bandage to a certain extent; for, by covering the surrounding textures and fluids with a cloud of evaporating iodine, it protects them from contagion.

In cases of severe wounding of the orifice of the vagina during labour, covering the labia with a rag moistened with 0·1 per cent. solution of corrosive sublimate, or a 2 per cent. of carbolic acid,[1] has proved highly beneficial.

Besides the above-named agents, painting the excoriations with the tincture of iodine, as practised in Breisk's clinic in Prague, has given satisfactory results, although I have never seen it necessary where iodoform was employed.

The position the lying-in patient should be made to assume during the first few days after delivery is still unsettled. Some accoucheurs make the woman lie immovably on her back during three days; others go to the opposite extreme (Goodel in America and Solovief in Russia), and even counsel a sort of lying-in gymnastics—as, for example, getting up on the second day, making the bed by the patient herself, and exercise; while the observations of Garrigues[2] and myself are against early rising from the lying-in couch.

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[1] Toporski, *loc. cit.*

[2] H. Garrigues, *The American Journal of Obstetrics*, 1880, p. 840; Solovief, "A quelle epoque convient il de faire lever les femmes après l'accouchement," *Archives de Tocologie*, 1881, p. 93.

The turning of a lying-in patient from her back on to her belly, or suddenly to her side, will, by lessening intra-abdominal pressure, be the cause of what is called a *negative pressure* in the abdominal cavity, *i.e.*, the womb and vagina (of a patient lying on her side) are pulled deeply into the abdomen, and hence results increased absorption of the fluids that are collected and are decomposing within the uterine cavity. In this manner such a change of position may be the cause of her auto-infection. On the other hand, keeping the patient immovably on her back for three days, may produce stagnation of blood within the pelvis, and may also, by favouring the formation of plugs within the veins, interfere with retrogressive changes in the uterus; moving the body favours, as is well known, contractions of the uterus. Therefore to avoid lessening intra-abdominal pressure when the patient turns from her back to her side, the belly should have a binder wrapt round it; antiseptics should at the same time be used for disinfecting the discharges from the vagina.

For the above reasons, after having applied a binder (particularly if the upper part of the body has been raised), I consider it right to allow the patients to turn on their sides the second day after delivery. It greatly conduces to their comfort, and in no way interferes with the physiological post-partum changes.

From the fourth day the woman may safely be allowed to assume a semi-recumbent position. By the ninth day she should get out of bed, as keeping it a longer time not only weakens her, but may be the cause of irregular retrogressive uterine development (retroflexion), and may even favour increased loss of blood. Dr Solovief, of Moscow, observed the best results follow early rising from the lying-in couch,—so far, at any rate, as retrogressive change in the uterus is concerned.

The proper nutrition of the lying-in woman has a by no means unimportant bearing on the prevention of disease, particularly among those who suckle their infants. Dr R. Barnes[1] regards appropriate feeding as part of those remedies which collectively constitute "antiseptic midwifery." (Most accoucheurs give healthy lying-in women beef-tea, milk in moderate quantities, and a small amount of bread; while to those who suckle they allow boiled fowl during the first few days after delivery, and roast-fowl, roast-beef, chicken, cutlets, and stewed apples after the fourth day, when the bowels have been moved.)

As I have heard the father of antiseptic surgery, Professor Lister, say, disinfectants cannot always prevent suppuration in a wound, but can only limit that suppuration, and render it more innocuous (non-infective). The same remarks apply, and even in a stronger degree, to obstetrics, where, as we have not the power to remove the self-inflicted wound of parturition, we fail, even with the strictest adherence to antiseptics, to prevent infection in all cases, and have thus to content ourselves with endeavouring to limit the ravages of the disease, and trying to give it a more favourable turn. This we are able to accomplish.[1]

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[1] R. Barnes, "L'obstetrique antiseptique et la septicémie en obstétrique," *Ann. de Gynekol.*, vol. xvii., 1882, p. 174; *American Journal of Obstetrics*, January 1882.

In obstetrical clinics, and in schools for midwives, the diseases and death-rate among lying-in women are greater than in maternities where no pupils are admitted. Thus, in the luxuriously constructed new obstetrical clinic of Paris, so highly lauded by the late Prof. Horwitz,[2] the mortality during the first year was as high as 1·8 per cent.[3] With Hecker of Münich it was 1·6 per cent. Even with strict antiseptic measures used by Bischoff of Bâsle, the death-rate there was 1·6 per cent., while with Ahlfeld[4] of Giessen it was 1·09 per cent. (the general mortality being 1·49 per cent.) In the lying-in barrack under my care, the mortality from puerperal fever was 0·8 per cent. out of a general mortality of 1·4 per cent. (622 cases). Meanwhile, in Tarnier's maternity pavilion, whither no pupils are admitted, and where the patients are always attended to by the same experienced staff, the death-rate during the first years never exceeded 0·5 per cent.; latterly, among 608 deliveries, there was not a single death.

In obstetric schools the parturient woman is examined by several pupils in succession, and thus slight wounds of the generative organs, very insignificant possibly, are inevitably produced. Every school, moreover, interferes to a considerable degree with enforced disinfection, particularly when non-resident pupils are admitted to the patient's bed-side. Inexperience in exploration has also an important bearing on the useless causation of wounds, besides increasing the possibility of infection.

With the view of preventing or lessening puerperal disease in obstetric schools, it is imperative that pupils, before being allowed to examine lying-in women, should be better versed in gynæcology than what they are as a rule, and that they should first be instructed in the digital examination of non-parturient patients. They ought also to be made to practise on the dummy pelvis, with a dead infant inside it, so as to accustom their hands to define the position of the fœtus. Only after having passed a practical examination in gynæcology, and on the dummy, should the pupil be admitted to the lying-in ward. Three years' practice of the above rules among young midwifery nurses have convinced me of their easy applicability and good results.

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[1] From Zweifel's experiments on decomposing matters, it would appear, as I have already pointed out, that antiseptics only arrest the action of putrefactive micrococci, and impede their excessive development, but do not kill them.

[2] *An Obstetrician's Excursion to Paris*, 1881 (Russian).

[3] "Compte rendu de la nouvelle clinique d'accouchement," *Archives de Tocologie*, 1882.

[4] *Berichte und Arbeiten aus der Klinik zu Giessen*, F. Ahlfeld, 1883, p. 234.

To carry out antiseptic measures to their fullest extent, it will be found necessary to have a special dress that could easily be washed, and kept in the institution itself. The nurses and accoucheurs should be provided with clean linen pinafores, while the disinfection of the pupil's hands had best be carried out under the personal superintendence of one of the assistants.

Students and midwives should carefully avoid the study of practical anatomy and pathology during attendance at the maternity. Should they have been in contact with dead bodies, or dressed sloughing wounds, they should frankly acknowledge it, and only return to the lying-in chamber after two days' absence, and after the employment of the strongest disinfectants. This is all the more necessary, as it is difficult for them to carry out the above rules of antiseptic midwifery which are within easier reach of the physician (the possession of several suits of clothes by the latter, for instance). Students and accoucheurs can keep pace with the extension of our knowledge regarding the struggle against contagious diseases, while midwives and nurses, on the other hand, are rarely able, after leaving school, to watch or study the progress of science. Moreover, our schools for midwives throughout Russia, and even in St Petersburg itself, have neither a proper programme nor course for study.[1]

In anticipation of our being some day in possession of a regular programme for schools for midwives in Russia, and that laws will also be passed affecting alike the whole body of our heterogeneously educated midwives, I shall here take the liberty of stating what rules I consider applicable to them, these rules being the outcome of what has been laid down in the preceding pages. Every midwife—and the rule applies to nurses who attend lying-in women as well—should comply with the following regulations:—

1. To put on a clean dress for every case of midwifery, the material being either chintz, or silk that washes well; and a clean linen or chintz pinafore, to be worn over a clean waterproof one.

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[1] In Prussia new laws affecting midwives have just been passed. Of these I shall here quote some of the principal ones referring to disinfection (see § 5 "Allgemeiner Verfügung Betreffend das Hebammenwesen," in the *Beilage zur Deutschen Medicinal Zeitung*, 1883, No. 38). All midwives are under a district medical inspector; they are obliged, before being allowed to practise, and during the whole continuance of practice—1. Personally to present their diploma and indicate their place of abode, and to show their obstetrical armaments and a note-book for inscribing their cases. 2. To carry out the printed instructions for midwives, with any additions that may have been made thereto. 3. To have a journal for noting down all their cases. 4. To keep their obstetric armamentarium clean, to have the necessary antiseptics, and to possess the official manual. 5. To report to the inspector every case of puerperal fever or death from parturition. 6. Every three years the midwife is subjected to a test examination at the district inspector's. If the answers prove unsatisfactory, the examination is repeated every three months till she is found fit to re-engage in practice. These examinations are noted in her diary; the directors of the maternities and the teachers of the midwives take part in these test examinations.

2. To keep the hands (short-nailed) scrupulously clean, and to wash them, before and after each exploration, with a solution of corrosive sublimate (1 part to a 100 of water, or 16 grs.[1] to 24 oz., *i.e.*, four tumblerfuls of water), or in chlorine water; a 5 per cent. solution of carbolic acid is far inferior.[2]

3. The syringes employed for gravid women, or during or after labour, should be glass pointed, and should each time subsequent to use be washed with a 0·1 per cent. solution of corrosive sublimate, or a 10 per cent. solution of carbolic acid. After the glass point has been used in any lying-in case, it should either be heated to redness or destroyed.

4. If either the midwife or nurse is in attendance on a puerperal woman, particularly one with putrid discharges, or on a patient with either cancerous or non-malignant sores, she had better abstain from obstetric practice. Should circumstances, however, compel her attendance in the lying-in chamber, she must wash her hands and arms in a $\frac{1}{10}$ per cent. solution of corrosive sublimate, or a 5 per cent. solution of carbolic acid, or in chlorine water. This must be carried out three times in succession, viz., immediately after examination of the contagious wound or discharge, on arriving home, and before attending the parturient woman. The dress should also be changed, and a bath taken if possible. The same threefold washing should be practised when the hands have come in contact with any dead animal matters, such as uncooked beef, the catamenial discharge, or the umbilical cord when in a state to drop off.

5. They should also avoid attendance on cases of diphtheria, scarlatina, erysipelas, and gangrene of the lung. Should there be a patient suffering from any of these diseases in the house occupied by the woman awaiting her confinement, the latter should be removed to another domicile if possible, or at any rate thoroughly isolated.

6. Every parturient woman should have her external generative organs washed with a 0·1 per cent. solution of corrosive sublimate, while injections into the vagina should be made with a $\frac{1}{20}$ per cent. solution, or a 3 per cent. one of carbolic acid and glycerine. In laborious labour, particularly when the temperature runs high, and the vaginal mucous membrane is dry, the injections should be resorted to during the whole course of parturition.

7. After the birth of the child, the external generative organs

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[1] Midwives and nurses should be allowed the possession of a strong solution of corrosive sublimate (45 grs. to ℥ii. water). A teaspoonful of such a solution dissolved in a tumblerful of boiling water has $\frac{1}{10}$ per cent. of corrosive sublimate. The addition of an equal quantity of water to the above solution will make it fit for vaginal injection. To facilitate the solution of the corrosive sublimate, the addition of a small quantity of glycerine is necessary.

[2] Midwives not unfrequently put the carbolic acid in water without the addition of alcohol and glycerine, with the result that the acid very often floats about the liquid and cauterizes the generative organs of the patient.

only should be washed; the placenta should not be squeezed out; while a piece of clean linen or hygroscopic wadding, saturated with a 0·1 per cent. solution of corrosive sublimate, or carbolic acid (5 per cent.), must be placed round the orifice of the vagina. Clean linen should be placed under the patient's buttocks, and examined every five minutes, to see whether hæmorrhage has taken place. If the bladder is full, the urine must be drawn off before the placenta comes away. To ascertain the position of the placenta, it is not necessary to introduce the hand into the vagina, but simply to watch and feel the umbilical cord. An hour, or, still better, two hours after the child is born, and when the patient has a bearing down pain, the belly should be gently rubbed, and after a couple of uterine contractions the womb should be pressed in the manner suggested by Credé.

8. In case of hæmorrhage, its origin should at once be ascertained, viz., whether it proceeds from lacerations of the vagina, or the neck of the uterus, or from the interior of the womb itself. If from abrasions of the vagina, then hygroscopic wadding, soaked in a solution of corrosive sublimate, should be applied to the wound, or the latter should at once be dusted over with iodoform powder, and the accoucheur at once sent for.

9. In case of rupture of the perinæum, or a lacerated or bleeding wound at the vaginal orifice, sutures must at once be applied. It should also be impressed on the midwife that there is more shame in trying to conceal these ruptures than in frankly avowing their presence.

10. After the placenta has come away, the external organs of generation only should be washed with the antiseptic solution; while syringing the vagina should be confined to those cases where the hand has been introduced into the canal. All abrasions and ruptures at the vaginal orifice and of the vulva should be dusted with iodoform or naphthaline, and this should be repeated after each washing.

11. The patient should never be left sooner than two hours after the completion of labour. Uterine contraction must be watched, and the organ moderately kneaded (massage); after that the binder should be applied, and also a weight to the lower part of the abdomen,—(clean bags filled with sand, which had been previously heated, and then washed with a solution of corrosive sublimate, or clean folded sheets—not a dirty old book, whatever its literary merits—are best suited for the purpose.)

12. The bandages must be scrupulously clean; doubtful ones should be washed in chlorine water, or a solution of corrosive sublimate.

13. In dressing the patient twice daily, only the external generative organs and the orifice of the vagina should be washed; injections into the vaginal canal or the interior of the uterus should never be attempted unless ordered by the accoucheur, or

where there is dangerous hæmorrhage. In the latter case antiseptic solutions only should be used.

14. The continued attendance of the midwife or nurse on the patient, particularly the first days after labour, is highly desirable. In any case she should be replaced by an able and trustworthy attendant.

15. The horizontal position of the lying-in woman should be gradually modified by placing pillows under the upper part of her body during the first four days, while after the fifth day she may be allowed to assume the half-sitting posture. She should not be allowed to leave her bed before the ninth day.

After I had written the above, an article by Dr Braese, from Professor Schröeder's clinic in Berlin, appeared in the *Centralblatt für Gynekologie* for 1883, p. 617. The author refers to the application of a solution of corrosive sublimate in 330 cases, with a 3·3 per cent. of sickness, and a mortality of 0·6 per cent. Of the fatal cases there was contracted pelvis in one, where an unsuccessful, or rather uncalled for, attempt was made at turning, which resulted in paralysis of the uterus. The second case was one of forceps, applied to a primipara; the cause of infection could not be ascertained. In the other eight cases the ailment was slight, and the fever short. These results were attained in spite of a large number of operations (27 forceps, 19 turnings, 4 separations of placenta by hand, and 2 cases of placenta prævia, of which one was central).

Such highly favourable results were never attained before in any clinic. For washing and injection a 0·2 per cent. solution of corrosive sublimate was used. In a case of abortion at the fourth month, the use of an intrauterine injection (of 0·2 per cent.) was followed by salivation, which soon passed away, however. The author agrees with Toporsky in considering corrosive sublimate the best disinfectant.

For the better illustration of the good effects which follow a strict application of the above rules in the treatment of lying-in women, I shall also here quote the comparative results obtained in obstetric practice before and after resorting to antiseptics. My observations were made in the same lying-in barrack, with the same staff of teachers and pupils.

I. From 1880 to 1883, with a less strict adherence to antiseptic rules than at present, the number of deliveries were 622. There were 226 cases of primiparæ, or 36·3 per cent., and nine cases of contracted pelvis, or 1·4 per cent. Operative interference was resorted to in ninety-eight instances, or 16·5 per cent. In eight of these the amnion had to be ruptured. The *expressio* of the fœtus (according to Kristeller's method) was applied three times, while there were fifteen extractions of breech presentations, or 2·4 per cent., and fifteen forceps cases, or 2·4 per cent. Podalic version, seven times, or 1·1 per cent. Perforation of the head and extraction by the cranioclast (Simpson's modified by Braun), six times, or 0·9 per cent. Separation of placenta, twice, or 0·3 per cent.

Episistomia, or punctures of the vulva, ten times. Suture of ruptured perinæum, thirty-two times (failure of union in one case, or 3·1 per cent. of all the cases). Of these 622 cases, 102, or 16·4 per cent., were taken ill after childbirth, and nine, or 1·4 per cent., died. Of the nine, six succumbed to septic disease, thus producing a mortality of 0·8 per cent.

II. After resorting to a more strict application of antiseptic treatment, from the 26th September 1883 to the 29th April 1884, I had 233 cases of childbirth, of which six were twins, or 2·5 per cent., and seventy-five primiparæ, or 32·1 per cent. The number of contracted pelves was eight, or 3·4 per cent. There were fifty-three obstetric operations, or 22·7 per cent. Of these, four were rupturing the membranes; separation of the placenta, according to Credé, fourteen times; extraction by hand of four breech cases, and application of the forceps eleven times, or 4·7 per cent.; perforation of head and extraction by cranioclast, one case. Podalic version, three times, or 1·2 per cent. Suture of perinæum, thirteen times (all successful). Of these 233 patients nine, or 3·88 per cent., were taken ill after delivery, and six of these had puerperal fever, or 2·6 per cent. of the whole number of cases. Of the puerperal patients two suffered severely, one of them having entered the maternity after labour had been going on five days, and with a temp. of 104°. Both recovered. Not a single patient died. They all remained in the lying-in wards for as long a period as any of the preceding 622 cases, and not one was removed to another hospital. The more tedious cases were taken to the gynæcological barrack.

The officials and female pupils connected with the maternity remained the same. It will also be observed from the above cited figures that operative interference was more frequent, relatively, in the second period (*i.e.*, that of strict resort to antiseptics) than in the first, and that the number of twins, as well as contracted pelves, was also greater. But, for argument's sake, we shall even admit that the number of cases of irregular labour was equal during both periods. The naked figures tell their own tale. The percentage of sickness after childbirth was 16·4 per cent. for the first period, while it was only 2·6 per cent. for the second. The death-rate was 0·8 per cent. in the first, and 0 per cent. in the second. Of course a much larger number of cases are needed than I have been able to bring forward to settle the question beyond dispute, but even with those we have, one can pretty safely assert that a more strict application of antiseptics in midwifery has lessened the mortality of childbirth far more than the most hopeful amongst us ever dared to expect. A strict adherence to the same rules in my private practice—very limited, of course, in comparison with my experience at the maternity—has of late years shown a mortality of *nil.*

Such highly favourable results, in spite of the comparatively small number of cases that I can cite in support of my views, have induced me to write the present paper.

IV.—HOW SIMS' SPECULUM OUGHT TO BE HELD.

By Skene Keith, M.B., F.R.C.S.E.

(*Read before the Edinburgh Obstetrical Society, 11th March* 1885.)

Dr Sims has described in his book on *Uterine Surgery* the position in which the patient ought to be placed when his speculum is used, and his directions are usually reproduced in works on diseases of women. Scarcely anyone has thought it worth while to give the assistant any instructions about how he is to hold this speculum, and a few even appear to allow that it may be held by the gynecologist himself. Dr Sims says that the assistant "holds it firmly in the desired position," and this is about as much information as is given in most works. One or two writers advise that traction be made to the right of the coccyx, so as to raise the upper buttock. The assistant is usually told to hold the speculum by the centre, and draw back the perinæum; very much fuller directions ought to be given, not only for his own but also for the operator's convenience.

In the Women's Hospital, New York, Sims' speculum is held in this way by a nurse, who has been in the habit of holding it at all the operations there for years, and she holds it better and longer than most people will do who hold it by the centre. For one winter I scarcely ever missed an operation there; and whenever the speculum had to be held for a long time, say three-quarters of an hour or longer, I observed that this nurse would occasionally take advantage of any chance to stretch her fingers.

The objections to this way of holding it are that most assistants will soon require to have a rest and stretch their fingers, and often do so when they are most wished to keep the whole of the vagina well in view. There is also a constant tendency to project forwards the tip of that blade which is inside the vagina so much that even the cervix uteri may be hid from view.

Before coming to the consideration of how the speculum ought to be held, we must first arrange who is to hold it. An intelligent nurse, able to follow the steps of an operation, is much the best person to employ. It will usually be found that a doctor or a student is the worst, for either of them wishes to see how the operation is getting on, and every time he looks into the vagina he allows the speculum to go forwards, and then most likely gets his head in front of the operator. The nurse must stand at the patient's back, but much nearer the operator's end of the table than she is usually told to do. She must not grasp the speculum by the central part, but by the external blade, the fingers coming round the convex part and the thumb fitting naturally into the concavity at the bend. She must not be told to draw the perinæum backwards and upwards, *i.e.*, towards the patient's head, but to pull backwards and slightly downwards away from the patient's head, steadily, and without the very slightest jerk. By traction in this direction the pelvic floor is opened up exactly in the way in which Dr Hart has described that it is done in labour. This method of holding Sims' speculum and of opening up the pelvic floor was shown to me by Professor Skene, of Brooklyn, before I had read this explanation of how the perinæum acts during parturition. If the child's head is able to gain most room for itself by opening up the pelvic structures in this manner, it is at least probable that we shall be able to gain most room for operating by imitating the natural process as nearly as we can. The nurse's elbow must be kept close in to her side. Whenever possible the table should be of such a height that it will allow of the elbow being a few inches higher than the orifice of the vagina. This arrangement allows of direct traction—the nurse's forearm and the central or connecting part of the speculum being in one line.

The reason for objecting to the speculum being employed to raise up the right buttock is, that during an operation on the cervix uteri no one ought to wish the speculum to be held exactly in the same place all the time, unless one is using a specially large one. The nurse ought to be able to follow the steps of the operation, and when the operator is at work, either on the lower or on the upper side of the cervix, she should, without having to be told, turn the speculum slightly, so as to keep the orifice of the vagina well out of the way. Very slight change in position is all that is required, so slight, in fact, that it is not every assistant who can appreciate the advantage to be gained. I have held Sims' speculum in this way for fully an hour without feeling the fingers of my right hand cramped or tired in the slightest degree. To do this you must hold the speculum by the outside blade, not by the centre, you must keep your elbow close to your side, and you must have the patient so arranged that your elbow is on the same level—or a few inches higher than the orifice of the vagina. The advantages gained for the operator are—that the nurse can more easily move the internal blade while she at the same time holds the instrument more steadily; and that the upper part of the vagina is opened up as fully as it can be, and the perinæum with the speculum is kept best out of the way. Some people seem to think that the first thing to do after exposing the cervix uteri is to fix a tenaculum into it and draw the uterus down. This cannot be safe whenever there is the slightest inflammatory state in the pelvis, and more than this, it is useless certainly when operating. Every one knows that the upper part of the vagina is the largest and the orifice the narrowest portion. Sims' speculum takes advantage of this condition, yet in spite of this fact, operations are often performed on the cervix uteri after it has been pulled down to the narrowest and most inconvenient part to which it can possibly be dragged. With instruments, whose handles are long enough, it is much more easy to operate on the cervix at the upper part of the vagina than after it has been drawn to the vulva.

V.—A CASE OF ACUTE RHEUMATIC PERICARDITIS, IN WHICH A NEW BACILLUS WAS FOUND.

By ALBERT WILSON, M.D., Leytonstone, Essex.

MISS E., æt. 17. For about five years, since I have known the patient, she has had a loud, soft, regurgitant mitral murmur. She suffered no inconvenience from it. Early in Dec. 1884 she got a chill by going out in evening dress on a cold night.

On 10th Dec. I was sent for. She complained of pain in the left knee. There was synovitis, with effusion. Temp., 100° (always under the tongue); pulse, 100. Thirsty, dry skin, etc. Treatment,—counter-irritation of the affected joint.

12*th Dec.*—Effusion and pain less; but marked dyspnœa, skin dusky, profuse sour perspiration. Pain at the precordia, and palpitation. Temp., 102°·5; pulse, 140; respiration, 80. Marked friction thrill over cardiac area, and increased dulness. A loud, harsh, double friction murmur masks the heart's sounds. The friction is heard and felt all over the chest, back and front.

Diagnosed pericarditis, with effusion of lymph, and some fluid. Examining the back, I found the left base dull; vocal fremitus absent; vocal resonance like the bleating of a goat, or œgophonic. Respiratory sounds harsh. Right base normal. I diagnosed left pleurisy, with copious effusion.

Treatment.—Rest, counter-irritation of precordia, salicylate of soda, and the patient to be wrapped in flannel.

15*th Dec.*—Temp., 102°; pulse, 120; resp., 80. Symptoms as last described, but greater dyspnœa and weakness.

25*th Dec.*—No improvement. Temp., 100°; resp., 80; pulse, 120. Countenance dusky as before, sometimes ashy pale. Dyspnœa worse. Symptoms at left base unaltered. Cardiac area,—friction still felt as before. The patient was too weak to allow percussion of the chest. The mitral systolic murmur was audible again, but feebler. It was heard at the apex, and to the left of the pulmonary area. Pulmonary second accentuated. There is no friction murmur, so I suspected adherent pericardium, with absorption of the fluid.

3*rd Jan.* 1885.—The patient died suddenly, after two hours' suffering, from dyspnœa and pain in the chest on the left side, the symptoms pointing to pulmonary embolism. There was no improvement in temperature, pulse, or respiration before death.

Autopsy.—Face dark blue. The pericardium and heart are distended. The right lung retracted, solid, non-crepitant; it is in the stage of red hepatization of about four or five days' duration. The left lung is pale, crepitant, adherent to pericardium. The left pleura contained about three pints of clear serum. There are no adhesions posteriorly. The pericardium was about ¼ to ⅜ inch thick, strongly adherent to the heart, and impossible to separate it.

Even the large vessels were matted with organized lymph. The left heart was almost empty. The right heart was dilated and full of dark clots. The pulmonary and aortic valves were competent. The left auricle was greatly dilated; it would hold about 8 oz. of fluid.

Mitral Valve.—Aortic segment normal size. The opposite segment was atrophied and thickened; this was the old-standing lesion. The left ventricle was hypertrophied, but not dilated. Compensation was established. Its wall was six times thicker than that of the left ventricle. The right ventricle was of normal capacity. It contained a large ante-mortem clot, which passed through the tricuspid orifice, blocking it. This clot would diminish the supply of blood to the lungs, and cause the dyspnœa; it was the probable cause of death. The right auricle was normal. The tricuspid and mitral valves were covered with recent fibrinous lymph, which would ultimately have shrivelled the valves. Portions of the heart, with thickened pericardium and pneumonic lung, were removed in eucalyptus gauze for further investigation.

Microscopic Examination.—Scrapings of the lung and pericardium were examined fresh, and also in the dry state, stained.

Lung.—Fresh preparation showed micrococci in pairs and singly, and a few short bacilli, some nucleated. No diplococci. The bacilli stain with methyl fuchsin.

Pericardium.—Show both in fresh and dry state very small short, non-nucleated rods, which take the pink stain. They are so small that at first I took them for micrococci. They are micro-bacilli.

Inoculation Experiments.—I used three sterilized preparations. —1*st,* Carrot infusion, two months old; 2*nd,* calf jelly; 3*rd,* ascitic serum collected antiseptically under the spray, three weeks old, and perfectly clear.

Pericardium Experiments.—*7th Jan.* 1885.—Under the spray I opened out the piece of heart, and with strict antiseptic precautions stript off a piece of pericardium, and then scraped off little pieces of lymph, and inoculated a flask of serum and put it in an incubator at 90° Fahr. The upper part of the fluid remained clear, but a deposit formed at the bottom. The germs were anærobic. Examined microscopically they were found to contain the same micro-bacilli without nuclei (Fig. 1).

Similarly, two other sterilized flasks of serum were inoculated from the flask with the same results. These bacilli were stationary. I made a third inoculation in beef jelly. They formed a superficial scum, while the deep inoculations formed hazy threadlike appearances.

Lung Experiments.—With similar precautions I incised the piece of lung, and inoculated two flasks of serum, as also flasks of carrot infusion and calf jelly. The latter failed, but the two flasks of serum yielded an abundant growth of organism. The turbidity began from the specks of lung at the bottom of the flasks, and

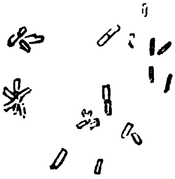


Fig. 1.

Pericardial Bacilli

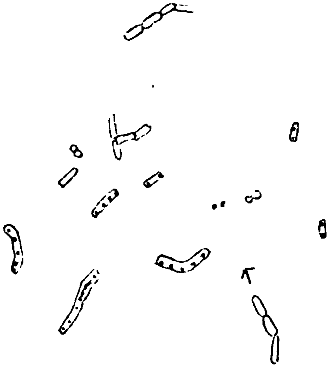


Fig. 2.

Lung Bacilli

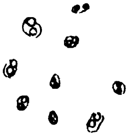


Fig. 3.

Diplococci from Sputum of Emphysema

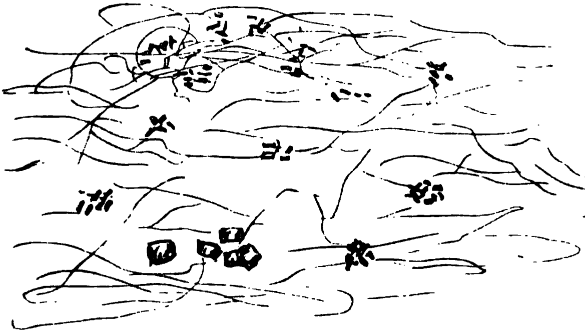
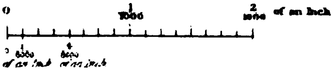


Fig. 4.

Section of Pericardium with Bacilli in meshes.



Micrometre Scale

Fig 5

J Bartholomew

grew in the shape of a fan till the whole fluid became turbid. Antiseptically I made successive cultivations in serum and beef jelly, obtaining always the same organism. The germs obtained in the first inoculation consisted of active, jointed, nucleated and non-nucleated bacilli, also micrococci (Fig. 2).

These bacilli were much larger than the pericardial bacilli, and mostly nucleated. I noticed that the bacilli near the surface were mostly nucleated, whereas the deeply situated bacilli were usually non-nucleated. There were no pneumonic diplococci of Friedländer. I may here state that I have usually failed to find diplococci in pneumonic sputa, whereas I got a beautiful specimen from a case of emphysema with chronic bronchitis (Fig. 3).

In one of the second crop I obtained long threads of jointed bacilli. In other cases they were composed of either single joints, or two to six or seven joints. Micrococci occurred in all the inoculations.

Microscopic Sections of Heart.—The section of the pericardium showed wavy layers of fibrin and lymph more or less organized. Strewn in these meshes were small clusters of micro-bacilli. They looked smaller than in the fresh state, being shrivelled by the spirit and drying nitric acid. There seems the same difference between fresh living bacilli and dried bacilli as there is between a green leaf and a withered leaf. The dried bacilli give a poor conception of the living organism. They took the methyl violet much better than the fuchsin. The latter lost their rose colour very soon (Fig. 4). Uric acid crystals were also present.

Sections of Lung.—Showed bacilli, but no diplococci. The fuchsin colour did not show well (Fig. 5).

Remarks.—The pneumonia was secondary to the pericarditis, which possibly accounts for its being accompanied by a rod-shaped bacillus instead of a diplococcus. The pericarditis was associated with a micro-bacillus, which was the primary germ or parasite. Probably diplococci are associated with primary or acute inflammatory pneumonia. Secondary pneumonia like this, or that which occurs in typhoid, measles, and other forms of fever or blood-poisoning, would more probably be associated with the primary germ. But this question is by no means settled.

VI.—TWO CASES OF PROGRESSIVE PERNICIOUS ANÆMIA.

By S. Rutherford Macphail, M.D. Edin., Assistant Medical Superintendent, Garlands Asylum, Carlisle.

(*Read at a Meeting of the Carlisle Medical Society on 12th February* 1885.)

The two following cases of pernicious anæmia both occurred in asylum practice much about the same time. It is interesting to observe that while poverty of blood is often associated with insanity, especially in recent and acute cases, the graver and more malignant types of anæmia are rarely met with by the asylum physician.

CASE I.—Sarah T., æt. 65, admitted 26th July 1883. This patient was the subject of recurrent attacks of mania. She had been five times previously in Garlands Asylum,—in 1870, 1873, 1875, 1877, and 1879,—and had on each occasion recovered after a few months' treatment. The last attack was the most protracted, and lasted over six months. On the occasions of her previous admissions she was described as a stout, rather flabby, but healthy-looking woman, the only noteworthy point in the records of her case being that she had "a mottled and purpuric rush on the lower extremities" when admitted in 1879. When last discharged from the Asylum she weighed 164 lbs.

As the patient lived chiefly by herself, little definite history was obtained of the onset of the present symptoms. She was known, however, to have been in weak health for several months, while her mental symptoms commenced a fortnight before admission—sleeplessness, talkativeness, excitement, and gesticulation being the prominent features.

On admission she was acutely excited and maniacal, foolish and extravagant in conduct, and in a state of great mental exaltation. Her physical condition was as follows:—Thin, rather anæmic, yellowish tinge of conjunctivæ; no spots on skin; heart sounds weak and muffled; coarse bronchitic râles over sternum; abdominal organs apparently healthy; pulse and temperature normal; weight 112 lbs.

Owing to her bronchitic symptoms she was kept in bed for a week. She took food fairly well, but scarcely slept at all. Under appropriate treatment her chest symptoms improved, and she was able to get up and go out for a walk daily. She became quieter and more reasonable, and during the next month improved considerably in health and appearance while taking a tonic of quinine and iron. This improvement only continued for a few weeks. During the early part of September her health failed considerably. She had occasional attacks of retching and vomiting, with loathing of food, and complained of lancinating pains radiating from the stomach all over the body. Her appearance was pale and exsanguine, and her mental state at this time was one of mild exaltation, with occasional outbursts of noisy and demonstrative excitement.

On 17th September her condition was as follows:—Face pale and anæmic; eyes sunken; conjunctivæ pale and yellowish; mucous membrane of lips bloodless; temperature 98°·2; pulse 120, weak; respirations accelerated. No increase of cardiac dulness; heart sounds distant and muffled; systolic basic murmurs, varying in intensity, heard loudest under left clavicle; *bruit de diable* in vessels of neck. No tenderness over stomach; other abdominal organs apparently healthy. The blood was very watery-looking. Tested with Dr Gower's hæmacytometer the red blood-corpuscles registered only 17·3 per cent. The individual corpuscles varied greatly in size. Many were irregularly shaped, crenated, or shrunken, while others had processes or were tailed. White blood-corpuscles relatively not increased. Hæmoglobin 30 per cent. To have liq. arsenicalis ♏v. thrice daily, and a pint of porter at bedtime.

During the following week she was able to be up for a few hours daily, but was noticed to be breathless on slight exertion. On 25th September she had an attack of syncope, which necessitated constant confinement to bed.

1st October.—Patient is gradually becoming weaker. She is excessively anæmic and cachectic looking, is constantly retching, and vomits a considerable portion of her food. She frequently complains of pain over stomach and intestines. Owing to the sickness continuing the arsenic was stopped on 29th September, and an iron mixture with extract of malt substituted.

17th October.—Examination of blood—hæmoglobin, 20 per cent.; hæmocytes (red blood-corpuscles), 14 per cent.; leucocytes, not increased. Patient is very prostrate, and is unable to sit up in bed without support. Eyes bright and glistening; conjunctivæ yellow, presenting a marked contrast to the blanched appearance of the skin and mucous membranes. She retains little food given by the mouth, and is getting nutritive enemata. Death took place on 21st October. For twenty-four hours previous to the fatal issue she lay in an unconscious state, with widely-dilated pupils.

Autopsy (thirty-six hours after death).—Body considerably emaciated; an anæmic appearance universal; integument sallow; conjunctivæ faintly jaundiced. The brain was of a paler and yellower colour than normal, and was also of softer consistence. Muscles pale and flabby. There was much external fat about the heart, while the cardiac muscle was pale, soft, and friable. Lungs congested posteriorly. Liver enlarged, fatty, with commencing cyanotic atrophy. Spleen and kidneys paler than usual, otherwise normal. The abdominal aorta and both common iliac arteries contained thick calcareous plates in their entire circumference.

CASE II.—Henry M., æt. 42, admitted to Garlands Asylum 14th February 1868. For twelve years previous he had been under treatment at Broadmoor Criminal Asylum, and was then a quiet, harmless dement, in good bodily condition, and free from physical disease. During the first fourteen years of his residence at Garlands he appears to have enjoyed fairly good health, and was able to work a little outside.

In the beginning of the year 1882 his weight was 150 lbs. He was scarcely so robust as he had been, though repeated examinations failed to detect any physical disease. He had extra diet and a tonic of iron and quinine, which he took regularly for some months. During the winter (1882–83) he was noticed to become tired and breathless after any exertion, was subject to attacks of diarrhœa, and was more dull and listless than usual. In the spring of 1883 he improved somewhat, and was able to be out a portion of each day. He was, however, unfit for any active exertion, and was observed to be getting pale and blanched. In April, and again in May, he had an attack of cardiac syncope. Various tonics and stimulants were tried, but without much appreciable benefit. During the month of June he suffered from œdema of the ankles, which followed on a third syncopal seizure, and he was kept in bed for the greater part of the day.

The following was his condition on 2nd July:—Patient has become so weak that he is now constantly in bed. Body fairly well nourished; no marked emaciation; a considerable layer of fat over chest and abdomen; muscles soft, but not atrophied; face, lips, and cutaneous surface generally pale and waxy. He is breathless on the least exertion, such as sitting up in bed; respiration, sighing. Pulse 106, soft and compressible. Cardiac dulness normal; heart sounds indistinct and muffled, first sound partially replaced by a murmur audible all over cardiac area, its maximum intensity over region of tricuspid valve; *bruit de diable* over vessels at root of neck. No pulmonary or hepatic disease detected; urine normal; no splenic or glandular enlargements; no purpuric spots on skin; no dropsy, except slight œdema of ankles, which has improved since patient went to bed on 23rd June. Weight 128 lbs.

12th July.—The patient's condition is steadily becoming worse. Anæmia progressing, and is now profound; the mucous membrane of the lips and conjunctivæ are very bloodless. There is great physical and mental prostration. He fainted yesterday when sitting up in bed to take food. This morning he had an attack of bilious vomiting. Ophthalmoscopic examination revealed a slight blurring of the optic discs, but no retinal hæmorrhages were observed. The blood was drawn with difficulty for examination. It was serous, in colour a pale pink, and contained 20 per cent. of hæmoglobin. The percentage of the red blood-corpuscles was 17·4; of these several were irregular in outline, being tailed, dumb-bell shaped, or crenated. The white blood-cells were diminished one-third. To commence treatment with liq. arsenicalis, ♏v., thrice daily.

19th July.—Appearance little changed, but he has had no further attack of syncope. In addition to the medicine, he is taking a pint of porter and two tablespoonfuls of cod liver oil daily.

26th July.—Has lately had attacks of retching and vomiting, usually after taking cod liver oil, so this has been discontinued, and extract of malt substituted. He is still very pale and anæmic.

Cardiac sounds more distinct and firmer in tone; the systolic murmur is now confined to tricuspid area. Examination of blood —hæmoglobin, 24 per cent.; hæmocytes, 20 per cent.; leucocytes, normal.

During the month of August the patient improved steadily, and slowly regained strength and appetite. On 12th August he was allowed up for an hour daily. Treatment with arsenic, malt extract, and porter continued.

On 4th September I made the following note:—Weight, 134 lbs. Patient has improved very much in appearance; his complexion is healthier, while he has now a faint ruddy tinge. He is up for the greater part of the day, and goes out for a walk when the weather is fine. Tricuspid systolic murmur is still heard faintly, especially after the patient is made to walk about; *bruit de diable* has disappeared. Hæmoglobin, 48 per cent.; hæmocytes, 40 per cent.

He continued the arsenic mixture—the original dose, ♏v., being adhered to—till 24th September. At that date his weight was 137 lbs. Appearance healthy, complexion ruddy, face slightly sunburnt. No trace of cardiac murmur. Hæmoglobin, 70 per cent.; hæmocytes, 58·3 per cent. With few exceptions the individual corpuscles are healthy in appearance, and many small spherical cells (microcytes) are seen in the field.

Any further notes in this case would be but a record of progressive steps towards recovery. He had no relapse, and by the end of October was able to walk three miles daily without fatigue, and appeared to be in better health than he had enjoyed any time during the preceding two years. His mental condition remains unchanged, except that he has lost his languid, prostrate look, and talks rather more than he did. On 4th December his blood was examined. The hæmoglobin and hæmocytes both registered over 80 per cent.; weight, 152 lbs.

Remarks.—These two cases are in their essential features typical examples of the disease, "progressive," "idiopathic," or "pernicious" anæmia, which was first described by Addison in 1855, —a classical description, which has had little added to it by subsequent writers. In regard to prognosis he says, "With perhaps a single exception, the disease in my own experience resisted all remedial efforts, and sooner or later terminated fatally." This was a universal experience, until the year 1877, when Dr Byrom Bramwell (*Med. Times and Gazette,* Sept. 1877) published a series of six cases of the disease, four of which were treated with arsenic, either alone or in combination with carbonate of iron, and recovered, while two treated with iron and quinine died. The following year Dr Lockie (*Brit. Med. Jour.*, Dec. 1878) reported three cases, all benefitted by arsenic. Since then, several cases of recovery from pernicious anæmia have been from time to time reported in the medical journals. In all of these the administration of arsenic, either alone or in combination, bore a part in the successful treatment. True, all the cases so treated did not recover; but, on the other hand, I have not met with a single authentic case of recovery from idiopathic anæmia in which arsenic did not form an essential part of the treatment. To show the great fatality in the disease, I may instance Dr S. Coupland's experience, who in ten years (1871-1881) had six cases under his care. In one case only did the patient recover and remain fairly well for over twelve months. She was treated with arseniate of iron (*Gulstonian Lectures on Anæmia*). Referring to my students' notes of lectures on Practice of Physic, I find that our teaching in those days was, "Iron does no good; the only thing of any use is phosphorus; transfusion of blood has been tried with success." Looking up this subject, I have met with no case in which treatment with phosphorus proved successful, while several are stated to have taken phosphorus and the phosphates without success. Drs Ransome and Mules (*British Med. Journal*, June 1883) record a case where transfusion of blood was tried, and although there was, as the result, a marked increase in the corpuscular percentage of the blood, death took place five days later. Transfusion to be of benefit would require to be resorted to at a less advanced stage of the disease than has usually been tried, and, at all events, before the cardiac muscle is advanced in degeneration.

It is certainly worthy of remark, that even in the latest editions of our text-books on medicine and therapeutics, with the exception of Niemeyer, no mention is made of the therapeutic value of arsenic in cases of pernicious anæmia. In so excellent a work as Quain's *Dictionary of Medicine*, the change of view in regard to the possibility of recovery from this disease is somewhat hazily shadowed forth by Dr Mitchell Bruce when he says, "The course of the disease is steadily towards death, in which it generally ends."

The result might have been different in the first case which I have detailed, had the treatment with arsenic been commenced earlier, and before the gastric symptoms became so distressing. In the second case the failure of iron and other tonics to do good, and the rapid improvement under the administration of arsenic were remarkable, while the patient kept well after the treatment was discontinued.

The *British Medical Journal* of 9th February 1884 contains the report of a case of pernicious anæmia, with a continuously high record of pulse and temperature. In the case of H. M. the pulse and temperature were noted regularly twice daily from 12th July to 6th October. The pulse at first was weak and rapid, from 100 to 116; after 1st August it never exceeded 90, and was usually from 75 to 80. The temperature was very uniform, and only varied from 97°·6 to 98°·4, except on the evenings of 15th and 25th July, when the thermometer registered 99° and 100°·4 respectively.

The undoubted benefit from the use of arsenic in cases of fatty

heart and pernicious anæmia is all the more remarkable, as it has been found of slight value as a blood restorer in simple anæmia. In five test cases of presumably healthy individuals, to whom liquor arsenicalis was given for a fortnight in doses varying from 2 to 10 minims thrice daily, I found a slight diminution of the red blood-corpuscles in three, and a slight increase in two of the cases. There was no increase in the percentage of hæmocytes in the case of a patient who was under treatment with liq. arsenicalis, ♏v., thrice daily, for psoriasis, from 2nd September 1883 to 10th March 1884. In a series of observations on cases of slight anæmia, treatment with arsenic in four seemed only to have a slight effect in increasing the corpuscular richness of the blood, certainly to a much less extent than in others of the series when iron alone, or in combination, was employed.

The practical point to be emphasized is that in arsenic we possess a remedy which has a fair claim to be considered a specific in cases of pernicious anæmia, and which holds out encouraging prospects of success, provided the treatment is commenced early enough, and the patient is not already too much exhausted.

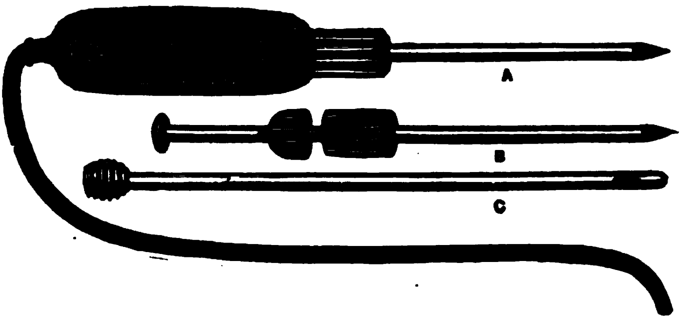
VII.—REMARKS ON PARACENTESIS AND ASPIRATION: A NEW ASPIRATOR AND A KNIFE ESPECIALLY ADAPTED FOR THE OPERATION OF INCISION OF THE CHEST.

By John Ward Cousins, M.D. London, F.R.C.S., Surgeon to the Royal Portsmouth Hospital.

The danger of admitting air into a cavity or wound has long been recognised, and the history of the art proves that a very general conviction on the matter has existed during the past 200 years. The surgeons of by-gone times discovered that putrefaction of the contents of a cavity often followed the entrance of air, and, moreover, that the exclusion of air was really the exclusion of a great element of danger. But the necessity of preventing its introduction was scarcely fully admitted until modern research had proved that impurified air was the constant vehicle of septic particles, and that in this way they often obtained an easy entrance into the fluids and tissues of the body. The first principle of antiseptic treatment, then, is the complete exclusion of air in all surgical proceedings whenever it can be accomplished; and in all other cases in which this attainment is impossible, the danger of septic change must be overcome by the purification of the air and surrounding objects, with the aid of subtle chemical substances, and the application of strict antiseptic precautions.

It is an obvious fact that the risk of surgical interference has always a direct relation to the size of the wound, the vitality of the region exposed, and the duration of the operation. Still it is equally manifest that the particles of infection and putrefact may find their way into the body through the smallest wound and during the performance of the simplest proceedings. Und some conditions, the entrance of a little air at the time of a operation is really a dangerous accident; and there is every reaso to believe that a few bubbles of impurified air may actually tur the scale in the direction of septic change. At the present da there are few surgeons who doubt the practical value of Listerian precautions, and it is a fortunate circumstance that a belief in the germ theory of disease, and an acceptance of modern speculations respecting the essential relation of micro-organisms to the fluids and tissues of the living body, are by no means necessary to the successful application of antiseptic treatment. The practice of antiseptic surgery demands both time and labour. Often in country practice the surgeon is called upon to perform operations unexpectedly, and many miles from his residence, out of reach of friendly assistance, and under circumstances in which the strict application of antiseptic precautions is a matter of impossibility. It is, however, the duty of all who undertake the responsibility of surgical proceedings to employ as far as possible every protective detail; and it may be confidently affirmed that this practice must be followed by a great reduction of risk, and in the long run a great saving of life.

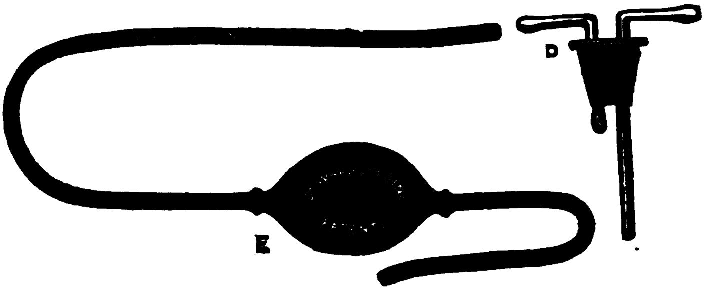
It is now my intention to describe a few new contrivances for the antiseptic performance of some of the most common and most simple of all surgical operations. Hundreds of cases of tapping, aspiration, and incision, are done daily in this country, and this fact alone must render any new and ready methods worthy of consideration—if they are really found in practice to be easy, protective, and efficient.



The "improved antiseptic trocar" is made for me by Messrs Arnold & Sons, of West Smithfield, in several convenient sizes suitable for the various kinds of tapping and exploring operations. The admission of air is not merely prevented by the syphon action maintaining a continuous flow, but the whole instrument, with the exception of the penetrating tube, is enclosed in an air-tight india-rubber case, within which it can be opened and shut by a simple joint movement. The simple construction of the trocar will be readily understood by a reference to the engraving. It is composed of two tubes which accurately fit one within the other. The outer carries a pen-shaped lance, Fig. B., and the cutting edge extends around only half the circumference of the tube. On its exterior there is a metal block, upon which a ring is firmly adjusted by means of a screw. The slit of a bayonet joint is situated between this block and the other end of the tube. The inner tube is a hollow piston, round at the joint with a lateral opening, Fig. C.; on the surface a little stop is placed, which moves in the slit on the outer tube. At the other extremity there is a grooved metallic boss by which the sliding movements are readily performed. The case and tube are continuous, and are made of thin india-rubber. An opening at the end allows the case to be drawn over the trocar by its own elasticity, and it is then securely closed between the block and metal ring. The block, moreover, serves for a handle to the instrument.

The complete trocar, ready for introduction, is represented at Fig. A. The pen-shaped point makes only a semilunar cut on the punctured part, by which the cannula is held more firmly in the tissues than by the triangular cut of the old trocar. All the movements within the india-rubber case are done by the hand unassisted by the eye, and these are very readily performed by any one after a little attention to the construction of the instrument. By the sliding action of the piston the point can be instantly exposed or protected, and by slight lateral movements the trocar can be alternately opened, half opened, or shut. The india-rubber case can be filled with water, or some deodorizing fluid, as an additional protection. Air will not, however, readily run up the tube and cannula, for the instant the instrument is introduced into a cavity, fluid rushes into the tube and drives the air before it. It is, however, always well to carry out every detail by filling the case with water, and by keeping the end of the tube carefully under the fluid towards the end of the operation, for, without these simple precautions, air may accidentally find an entrance during some movement of the body or change of posture.

The antiseptic trocar is made in five sizes, and is thus adapted for every kind of operation. The smallest instrument is a capillary trocar evacuating at the rate of about 15 to 30 ounces per hour, and is extremely serviceable in cases of cardiac dropsy. No. 2, I use for ordinary ascites. The discharge amounts to 3 ounces of fluid per minute, so that an ordinary effusion of 50 pints would require a period of about five hours for its removal. This is abdominal tapping by slow evacuation. The patient need not be discomforted by compressing the body with bandages to hasten the expulsion of the fluid. The drain is so slow, and the subsidence of pressure so gradual, that the bloodvessels are not subjected to sudden dilatation, and the circulation through the organs has tim to maintain its proper balance. The operation causes no faintnes or distress, but on the other hand imparts a gradual and increasin sensation of comfort and relief. No. 3 is a special instrument fo tapping operations in renal and hepatic cases. No. 4 is the size I prefer for all effusions in the chest; and No. 5 is a large instrument especially adapted for cystic dropsy whenever the palliative operation of paracentesis is considered the right procedure.

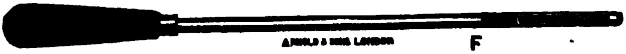


A New Aspirator.

The antiseptic trocar can be instantly converted into a simple and efficient aspirator. For this purpose the two-way india-rubber cork, Fig. D, must be securely fitted into a convenient glass bottle, and the end of the trocar tube connected to it. In place of the ordinary piston air-pump, I have introduced a very simple and handy exhauster. It consists of an india-rubber ball fitted with small valves and a central recoil spring, Fig. E. The direction of the discharge is marked on the outside of the ball. The instrument has no joints or stop-cocks to get out of order, and the opening and closing of the tube is regulated by the pressure of the finger and thumb. The operator requires no assistance, for, while controlling the flow with one hand, he can work the exhauster with the other. Gentle compression of the ball is often sufficient to sustain a steady evacuation.

New Method of Performing Incision of the Chest.

The antiseptic trocar can be easily converted into a blunt-pointed bistoury, for the treatment by incision of empyema, and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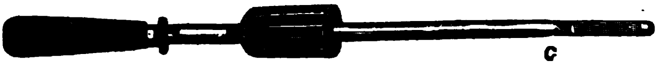
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other deep-seated abscesses. The knife is represented by Fig. F. The cutting edge is two inches in length, and is fixed at the end of a long stem, which permits it to be projected completely beyond the point of the trocar. The handle on one side only is ridged, and this is on the side corresponding to the edge of the knife. When this application of the instrument is required, the trocar must not be withdrawn, but only the india-rubber case and inner tube removed, so that the outer tube can be utilized as a sheath for the knife during its introduction. By this contrivance the operation of incision of the chest can be very easily and rapidly performed, and the conversion of the exploring instrument into a bistoury is also serviceable in many other minor operations. In many cases the cutting from within outwards, after the insertion of the knife into the cavity, is more readily and safely accomplished than the usual method of direct incision. The operation can be performed in the following way: At the region of the chest selected an exploratory tapping is made with the antiseptic trocar No. 2 or No. 4. The former is a very convenient instrument for all cases occurring in children. If incision be now determined upon, the skin and superficial fascia are to be divided with a sharp-pointed knife, commencing at the point of penetration of the trocar and extending in the direction of the intercostal space for about an inch and a half. The india-rubber cover and the cannula are then removed, the empyema knife is slipped along the tube, and the incision of the deep structures completed by cutting from within outwards. I now introduce one of my self-adjusting drainage tubes, and cover the wound with an antiseptic dressing and large pad.

VIII.—CASE OF EMPYÆMA.

By M. H. Gardiner, M.B., L.R.C.S.

The following occurred in the practice of Dr Anderson of Richmond, and to his courtesy I am indebted for permission to publish it.

The patient, a child of ten, caught a severe chill in January last while waiting at a railway station. Left-sided pneumonia ensued, and in a few days pleurisy with effusion supervened. The attack was a severe one, and for a fortnight a fatal issue was apprehended. Gradually, however, the patient rallied. As the effusion showed no signs of absorption, it was deemed advisable to tap, both for the sake of relief and for purposes of diagnosis, suspicions being entertained of the character of the effusion. At this time the child was a mere skeleton, with constant hacking cough, a pulse of 130, and a temperature of 102°·8.

Accordingly, on 14th February, a large aspirator needle was introduced in the posterior axillary line between the eighth and ninth ribs. The worst suspicions were verified, and a pint of pus was withdrawn. A tolerably sized drainage tube of metal, bent like a catheter, and provided with a shield, was with some difficulty introduced through the needle wound, and the cavity washed out with warm corrosive sublimate solution (1-2000). No spray was used, and the dressings consisted merely of carbolic gauze, the first layers being dipped in the sublimate solution. Next day the temperature had fallen to 100°, the pulse was quieter, and the child had slept well, the cough having entirely disappeared. Free discharge had taken place, necessitating renewal of the dressings. For a week the dressings were shifted daily, and the cavity washed out as before. The temperature fell to normal, and the child began to put on flesh. No medicine was prescribed, nourishing diet and plenty milk being trusted to alone. The discharge gradually diminished; washing out of the cavity was discontinued; and on 12th March, as the child complained of the metal tube hurting her, it was withdrawn and a common one inserted instead, threaded with cross wires. This answered well, and was shortened from time to time as it was pushed out. On the 20th March it was pushed out altogether, and was not reintroduced.

2nd April.—The wound has entirely closed. The lung is expanding well, breath sounds are heard all over it, and the percussion note is good. The child is fat and rosy, has been out, and runs about with ease, suffering neither from pain nor shortness of breath.

I have sent you the above, in order that it may be added to the interesting series already published in your Journal, and also with the hope that it may be of use to some.

Keeping this in view, the description has been confined as much as possible to the treatment adopted in dealing with details on which authorities are doubtful, and the means employed to meet the various difficulties. These difficulties appear to be,—*1st*, The introduction of the tube; the spot selected here did well, and lower than the eighth interspace seems undesirable, and even at times, as in one case lately reported in your columns, fails altogether. Having got the tube in, the next thing is to keep it open and in its place. The metal tube used here with its bend and shield answered admirably—the bend prevented its being pushed out, and the shield its being sucked in. The latter accident appears to have happened in more than one case, where the old tubes, threaded with string only, were used; cross wires, however, will easily remedy that.

2nd, Are we to wash out the pleura or not? Many authorities are against this, and in your April number it is condemned out and out in your Periscope of Medicine. In this case it never did the slightest harm. The solution used was the corrosive sublimate (1-2000), and to it I attribute, in great measure, the rapid drying up of the discharge. When using it lately as house surgeon in the Infirmary, it always seemed to me to have a decidedly astringent power in cases of this description, and never yet have I seen it produce poisonous symptoms.

Finally, our old friend the spray does not appear to be absolutely necessary. It was never used here, and the discharge kept sweet throughout. As a precaution, however, on all occasions of dressing, a sponge dipped in the solution was applied to the mouth of the tube as long as it was uncovered, and thus acted as a filter to any air entering the cavity.

Part Second.

REVIEWS.

Bacillary Phthisis of the Lungs. By Professor GERMAIN SÉE. Translated and edited for English practitioners by WILLIAM HENRY WEDDEL, M.R.C.S. Eng., S.Sc. Cert. Camb., etc. London: Kegan Paul, Trench, & Co.: 1885.

To any unprejudiced person reading Dr R. Koch's bacteriological researches and experiments, and particularly his later classical communication on the Ætiology of Tuberculosis (*Mittheil. aus dem K. Gesundheitsamte*), it seems difficult to resist the conclusion that lung phthisis is primarily a mycotic process, caused and solely caused by certain specific, well-characterized micro-organisms. And yet there are not a few careful and competent observers who say and believe that first of all there must be present in the lung-tissue non-specific, chronic inflammatory infiltrations, in themselves benign and harmless, but which afford to the ubiquitous tubercle bacilli, incapable of development in the normal lungs of normal individuals, the possibility of a suitable nidus and breeding ground. M. Sée adopts the former hypothesis, and his book is written from the standpoint that Koch's bacillus produces the tubercular lesion and all its consequent results, and precedes in time and place all other phenomena.

In the first section of the volume the "true ætiological definition of bacillary phthisis" is given, as also an account, short and imperfect, of the natural history of micro-organisms in general and of pathogenic or specific ones, and a bead-roll of the maladies due to them follows. The second part is occupied with the history of the bacillus, how it is to be found, where it is to be found, and how it may be cultivated. The third part shows that the bacillus produces the entire series of lesions referable to tuberculosis, and that tubercle looked at solely from an anatomical point is susceptible of different interpretations, but that the bacillus gives unity to all its manifestations, whether acute or chronic.

The fourth part treats of causes, experimental, atmospheric, and here some interesting statistics are quoted as to the prevalence of germs at various altitudes, the outcome being that the higher one goes the fewer bacteria, until at the snow line they disappear. Various diets are spoken of in this connexion, and one containing excess of potash is said to be the very best suited for feeding the parasites. Then there are vital, pathological, and physiological causes; among the latter pregnancy is mentioned as aiding powerfully in the development of phthisis. In our experience this is not always the case; pregnancy repeated frequently, and the labours being all very laborious ones, having apparently influenced one case of chronic phthisis beneficially instead of injuriously.

The fifth part is clinical, and looks at phthisis as it is met in actual practice, as latent, distinct, masked, completely developed, and as acute miliary. The chapters on Auscultation and Percussion are omitted in the translation, which we think is regrettable; it is always refreshing to know *how* a man reaches his diagnosis. What is given is, however, worth reading, elaborate and yet practical, and has something to say about the history of pleurisy as a premonitory lesion, or, later on, a grave complication.

The sixth part is hygienic. Tuberculous contagion is exerted in two ways: (1.) By the digestive tract through the agency of food; (2.) By the atmosphere. We are told not to eat infected meat or drink bacilliferous milk, and that contagion by the air is much more difficult: there must be a special atmosphere contaminated by the *débris* of dried sputa, which dust must be more abundant in the air of cities and crowded workshops. Sputa should be disinfected by a five per cent. solution of carbolic acid, but the author does not mention the exhaustive researches of Schill and Fischer on this very subject. Under this heading the subject of matrimonial contagion is mentioned, in which the author seems to believe, at least, there is "danger of exhaustion for the phthisic, and danger of contamination for the healthy person, whether husband or wife."

The seventh part is therapeutic, and has not much of new to say. It is divided into climatic, and by drugs. Climates of altitudes and maritime stations operate therapeutically in one way; excess of oxygenated air seems to oppose the existence of the bacillus, and a rarefied atmosphere facilitates complete æration of the lung, and prevents the multiplication of the bacillus in stagnant secretions. As to the drugs, they are necrophytic or trophic, and we have ample accounts of the uses of iodine and arsenic, and how and why they may be beneficial or the reverse. No mention is made of cocaine in the treatment of laryngeal forms of phthisis. We fear that the discovery of the bacillus as yet has had no appreciably beneficial effect on treatment, all antiparasitic remedies giving negative or very uncertain results. The bacillus, however, renders the diagnosis absolutely certain when *it is found;* when a negative result is obtained the diagnosis must be made out in other and older ways. Neither does the bacillus help prognosis very much, for the following reasons:—As they come only from open cavities, they can be no measure of the number of tubercular foci, as they may multiply in bronchiectatic or cavern contents without at all influencing the actual tubercular process, and as the course, and consequently prognosis, depends on the development of tubercle in other organs quite independently of sputum and its contained bacilli. If no tubercle bacilli are to be found, there are no melting foci at the time; but even with ulceration and cavity formation, one cannot expect from day to day necessarily to find bacilli. The cavity cleans itself, perhaps cicatrizes, or its communication with a bronchus may be temporarily blocked by tough secretion, or even permanently by cicatricial obliteration. Gaffky (twice misprinted Gasky) has constructed a very elaborate scale as to number of bacilli (*Mittheil. aus dem K. Gesundh.*, 1884) in the sputum, but a simpler one is that of Dr G. H. Mackenzie, which appeared in the February number of the *Edin. Med. Journal* for 1884. But really conclusions worth anything cannot be drawn from their number, as we have had occasion to observe in some cases. In our opinion, the translation is marred by such words as "sonority," "cavitary," etc. Surely any one with a healthy veneration for English could easily have found better words; and at page 133 "peristole" is given, non-italicized, we suppose as the French equivalent of peristaltic action. We can honestly recommend the book as giving a pretty full and accurate account of the modern ideas as to phthisis and tuberculosis. One thing has surprised us, but it is no fault of the translator, that M. Sée makes no mention of the surgical treatment of lung disease, a treatment which has yet a great future before it.

On Sclerosis of the Spinal Cord: including Locomotor Ataxy, Spastic Spinal Paralysis, and other System Diseases of the Spinal Cord; their Pathology, Symptoms, Diagnosis, and Treatment. By JULIUS ALTHAUS, M.D., M.R.C.P., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, etc., etc. London: Longmans & Co.: 1885.

THE contents of this volume are fully indicated by its title, but, as will be anticipated, the greater part of its three hundred and eighty pages is devoted to locomotor ataxy, or tabes dorsalis, which is the designation the author prefers.

The book is an elaborate essay on the interesting and important questions bearing upon the morbid anatomy, the pathogenesis, the etiology, the symptoms, the prognosis, and the treatment of sclerosis of the cord. That some of the chapters should be short is only an expression of the present incompleteness of our knowledge, which will doubtless be removed by future workers.

The plan of the book is excellent; the contributions of the leading workers are referred to fully; while the various theories advanced to explain phenomena are discussed at length. All through it is characterized by a vigour and independence of view which is refreshing, while its literary style is clear and virile. The author's contentions are illustrated by cases drawn from his own extensive experience, and advocated in a tone which leaves no doubt as to his confidence in their accuracy. That on many points there is and will continue to be much doubt, notwithstanding the appearance of this contribution to the discussion, is no disparagement to the book, for we have not yet reached that point where the work and opinion of any one man will settle the points at issue. We are far from giving our adhesion to many of Dr Althaus's views, yet we welcome his book, for it will tend to keep certain issues clearly before the profession, and from its suggestiveness it ought to stimulate further observation.

In the chapter on etiology we would draw the author's attention to the fact, that the disease to which he refers as having occurred in Liverpool among horses has been investigated by Principal Williams of the New Veterinary College of Edinburgh, and that he has found the epidemic referred to was associated and probably due to a micro-organism which was found abundantly in the blood, and which seems to have been conveyed by the fæces of rats, of which the *mutters* on which the horses had been fed contained a large quantity. The micro-organism was cultivated from the mutters; and, further, it was found that horses fed with mutters which had been subjected to a considerable temperature did not become affected. We would further point out that atrophy of the left recurrent laryngeal nerve, and of the muscles supplied by it, is a very common affection in horses, and is not regarded as due to any central disease, much less to any special feeding, but to local pressure.

The book is well worthy of careful perusal and consideration, and to those wishing to make themselves acquainted with the literature of the subject it provides a fund of reference.

The Ear: Its Anatomy, Physiology, and Diseases. A Practical Treatise for the Use of Medical Students and Practitioners. By CHARLES H. BURNETT, A.M., M.D., Professor of Otology in the Philadelphia Polyclinic and College for Graduates in Medicine; Consulting Aurist to the Pennsylvania Institution for the Deaf and Dumb; Aural Surgeon to the Presbyterian Hospital, Philadelphia; President of the American Otological Society. With 107 Illustrations. Second Edition, Revised and Rewritten. London: J. & A. Churchill, 11 New Burlington Street: 1884. Pp. 585, 8vo.

IT is seven years since we noticed in the August number of this Journal (August 1878, p. 165) the first edition of Dr Burnett's work. The book was very favourably received. Its chapters on the anatomy and physiology we drew attention to as being particularly good, and its references to the investigations of others we considered as enhancing much its value as a text-book. All the good qualities of the first edition are retained in the second, which is really a revised edition. The rapid, and in some cases eminently practical advances in the science of Otology, which have taken place during the last seven years, have been duly regarded by our author, who in his revision has made many alterations, omitting obsolete material, and entirely rewriting the text of such important subjects as the treatment of chronic otorrhœa, the classification and treatment of aural polypi, and the diagnosis, etiology, and treatment of aural vertigo, otomycosis, the abnormalities of the auricle, etc., etc. A new typographical arrangement allows the numerous additions in the text and illustrations (former edition 87, present 107 illustrations) to be accommodated without increasing the bulk of the volume. "The views of Dr Burnett, in regard to chronic purulent catarrh of the middle ear, lean rather to the dry treatment, and his opinions on all subjects, while conservative, are not ultra." The printing, paper, and size of the book are all that could be desired. We sincerely believe that the earnest and zealous labours of our author have made his work more than ever worthy of the kind reception accorded to the first edition.

An Introduction to the Study of the Diseases of the Nervous System. By THOMAS GRAINGER STEWART, M.D., F.R.C.P.E., F.R.S.E., Physician in Ordinary to Her Majesty the Queen for Scotland; Professor of the Practice of Physic and of Clinical Medicine, University of Edinburgh. Edinburgh: Bell & Bradfute: 1884.

THIS volume, containing "lectures delivered in the University of Edinburgh during the tercentenary year," will no doubt be welcomed by those of Dr Stewart's disciples who may desire to have some tangible *souvenir* of their master. We approached it with considerable expectation; but rising from a careful and conscientious perusal of the work, we must confess to a feeling of disappointment. Regarded simply as a specimen of ordinary class teaching, we should not be inclined to pass severe criticism on the work. Emanating, however, from the Chair which was in the past adorned by the presence of Cullen, Alison, and Laycock, and put forth, moreover, as a landmark by which mankind may remember the "tercentenary year," these lectures cannot escape rigorous examination and close comparison with the former teaching from the Chair. Judged in this way, the lectures must be pronounced to be found wanting.

The general style of the work hardly comes up to our conception of what is demanded from a learned teacher; but as the lectures have been taken down in shorthand by one of the numerous friends mentioned in the work, any imperfections in literary workmanship may be due to the method of book-production which has been employed. There is, as might be anticipated, no attempt to advance new theories in these lectures; but the manner in which the subject is approached is in some respects different from any other with which we are acquainted, and novel, therefore, to a certain extent. The method of grouping and marshalling the various facts is characterized by the careful arrangement which is one of the many good features of Edinburgh teaching; but this advantage is unfortunately counterbalanced by what we may term a lack of mental perspective. This is shown not only in the relative weight attached to the different divisions of the subject, which seem in some instances to be held in an inverse ratio to their absolute value, but even in the size of the illustrations, which are on the largest scale, in some cases, when of least importance.

The three lectures devoted to the medical anatomy of the nervous system deal, in the first place, with sensory nerve endings, with illustrations which might have been suppressed with advantage, for the student ought to be familiar with their appearance before he approaches his true medical studies. From these nerve endings the lines of sensory conduction are followed to their central connexions; and from these centres again the lines of motor conduction are followed to their peripheral terminations. These three lectures are greatly enriched by lithographs of Hamilton's beautiful brain sections.

Among the clinical facts, the sensory functions receive attention in the first place, and a relatively large amount of space is devoted to the organs of special sensation, especially that of sight. We cannot but regret in this connexion that the representations of ophthalmoscopic appearances should have been borrowed from the now time-honoured plates of Liebreich. With such ample opportunities for studying the fundus of the eye in nervous diseases, and with the assistance given in their portrayal by Wyllie's coloured backgrounds, some original drawings might reasonably be expected if any illustrations were to be given.

The motor functions occupy two lectures, electricity in diagnosis receives one, and the two following are devoted respectively to vasomotor, secretory, and trophic functions, and to cerebral and mental functions. The twelfth lecture deals with language, and contains an elaborate discussion, on the lines of Küssmaul's article, of its alterations; but it is marred by a loose application of the terms employed which cannot fail to be confusing to the student. Pathology and treatment receive a lecture each, with which the work ends.

The work is what it professes to be—an introduction to the study of diseases of the nervous system, and it gives a fairly complete if rather colourless account of the modern methods of investigation into

such diseases. We have spoken of it with perfect candour, because we cannot think it worthy of Dr Stewart's reputation or position. It will have nevertheless its sphere of usefulness. To the busy practitioner, who may not have been able to keep abreast of the advances made in the study of nervous diseases during recent years, these lectures will be useful, and we have no doubt that an intimate acquaintance with their contents will greatly add to the comfort of those members of the University who propose to appear for the next final examination in medicine.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIV.—MEETING VII.

Wednesday, 15*th April* 1885.—Dr H. D. LITTLEJOHN, *President, in the Chair.*

I. EXHIBITION OF PATIENT.

Dr Carmichael showed a girl, æt. 3 years, suffering from FACIAL PARALYSIS AND DOUBLE CONVERGENT STRABISMUS. The child had been under treatment in the Royal Hospital for Sick Children. On examination she was found to be ill-nourished, and suffered from a double convergent strabismus, some vertical nystagmus, and facial paralysis of the left side. There was no previous history of disease beyond an attack of whooping-cough. The case had been under observation for several weeks, and they had not been able to throw any light on its true pathology, further than that they believed that the lesion was localized in the nerve centre. There was no appearance of the palate or tongue being affected, and neither the history nor the symptoms pointed to the ordinary causes of facial paralysis, such as cold or rheumatism. The history and symptoms indicated the probability of a central lesion. What the exact nature of this was, he was not prepared to say. There might be some tubercular lesion in the medulla, or some local changes due to syphilis. An interesting point was the double paralysis, the left portio dura and both sixth nerves being affected. The nuclei of the sixth and seventh pairs were closely connected at their origins, and it was not unusual in cases of central lesion to have one abducens and portio dura affected, but paralysis of both sixth nerves along with the seventh was rare. The treatment had consisted of nourishing diet and iodide of potassium, and she had improved to some extent on it.

II. EXHIBITION OF PATHOLOGICAL SPECIMEN.

Dr Mackenzie Johnston showed a THORACIC TUMOUR. The patient, a man, æt. 44, from whom the tumour was taken, consulted him first on the 12th August of last year. He complained of a change in his voice and great difficulty of breathing. The tone of the voice gave one the impression that there might be some internal pressure causing paralysis of the laryngeal muscles. The chest was therefore examined, but beyond some dulness on both sides of the sternum, there did not appear to be anything abnormal. The larynx was afterwards examined by Dr MacBride, who found that he had paralysis of both abductors of the vocal cords. The patient was then put on iodide of potassium, and told that he had a tumour or aneurism in his chest, probably the latter. He was not seen again until about a fortnight ago, when Dr Johnston was sent for to his house. He had great difficulty in swallowing, as well as acute bronchitis, which very markedly aggravated the dyspnœa, but on examining the chest the previous area of dulness was found to be much increased. The râles over the chest, especially on the left side, prevented the heart sounds from being examined minutely, but no murmur could be made out. The patient died next morning. At the post-mortem examination, which was made by Dr Bruce, the lung on the right side was found partially collapsed, and the upper part of that side of the thorax showed a tumour which at first was partly concealed by the heart and pericardial vessels. It was pricked with the knife, and a tremendous amount of fluid and broken down debris escaped. It was not, however, a cyst. A considerable solid portion remained. This, when removed, weighed about two pounds, and the fluid and debris which escaped must have weighed about one pound more. It was found to be sarcomatous. It was curious how so large a tumour could have existed so long without more symptoms. The patient had attended at his office up to about a week before his death, and the only symptoms he complained of were occasional dyspnœa, some difficulty in swallowing, and a change in the tone of his voice. Death had probably been caused by paralysis of the heart, some of its nervous structures being pressed on.

III. EXHIBITION OF NEW SURGICAL APPLIANCE.

Dr J. Moir showed some INDIA-RUBBER PADS FOR THE TREATMENT OF FLAT-FOOT. The steel supports which were usually inserted in soles of the patient's boots, though very efficient, got rusted and were sometimes broken. After trying two or three substitutes, he got some india-rubber pads which answered the purpose very well, but the difficulty was to keep them fixed. This was overcome by covering the under surface and side with cloth, which was sewn to the inside of the boot. He had now used them for several years and was thoroughly satisfied with them. Their advantages were that they were pliant, elastic, and yielded to the movements of the foot. They were durable, might be worn in different boots, and they were cheap. These pads are manufactured at the North

British Rubber Works, Castle Mills, where much pains have been taken to make them as perfect as possible.

IV. Original Communications.

1. *Dr Roderick Maclaren* read his paper on OVARIOTOMY IN A COUNTY HOSPITAL, WITH A NOTE OF THE METHOD OF PREPARATION OF CYSTS FOR EXHIBITION, which will appear in a future number of this Journal.

Dr Angus Macdonald was both interested and gratified with Dr Maclaren's paper and the excellent results he had obtained. He was sure Dr Maclaren need not apologise for country surgeons, who undertook such operations in face of the difficulties they had to contend with in small hospitals. He thought they were as well provided for as some of the surgeons and others who had the special management of such cases in large hospitals. He himself had to begin by operating in a general ward, not having a private room where he could put ovariotomies. He was rather disappointed to find Dr Maclaren clinging to the use of ether in this operation. Being an Edinburgh student, he should have thought he would have had a fondness for chloroform. His experience had convinced him that it was a pleasanter and equally safe anæsthetic as the ether. He had tried ether alone, and ether mixed with chloroform. With ether alone he had repeatedly had the disagreeable result of bronchitis following an important operation. Then when the ether was given mixed with chloroform, as recommended by Erichsen, the patients got very little of the ether, as it was so much lighter than the chloroform, so that it was really an expensive mode of administering chloroform. The ACE mixture he regarded as an absurdity. Inhalation was an awkward way of taking an alcoholic stimulant. What he preferred was to give the patient a good ounce of brandy or so before she was put on the table. The opinion that vomiting was more frequent after chloroform he believed to be a mistake. The occurrence or not of vomiting depended upon the after management of the case. If the case was progressing favourably, it was impossible to give too little food or drink the first forty-eight hours after operation. If such patient had nothing but a wet cloth to suck during that period, she would not suffer from vomiting. In case of depression it was necessary to administer an alcoholic stimulant freely, but he believed absolutely no food should be given for the time mentioned. In regard to the treatment of the pedicle, he was glad to hear that Dr Maclaren used the ligature. Notwithstanding the surpassingly good results obtained by Dr Keith and others by the hot iron, he had given the cautery up entirely. He had lately opened the abdomen twenty-seven times in succession without a single bad result, and in none of these cases had the hot iron been used, but only silk ligatures. In managing the abdominal wound there is considerable advantage in being particular about the deep stitches. They should be numerous and near the edge, consequently they could be tied more firmly. There was less tension on the individual sutures, and they could be left in longer. In regard to drainage he differed from some authorities, but he disliked it under the conditions in which Dr Maclaren and himself had been placed. Whilst he believed in the necessity of extreme caution not to admit any foul material into the abdomen, he did not drain so much as he used to do. He was anxious to have everything sealed up as soon as possible, to have everything of danger kept out. In regard to the question of antiseptics, he thought their practice in Edinburgh was different from Dr Maclaren's. Dr Maclaren was evidently thorough. The chimney was shut up, and the air saturated with carbolic vapour. But the doctor must remember that he had to get in and out by the door, and the first opening of the door admitted air which he could not disinfect. He thought further it was impossible to disinfect thoroughly by means of the spray. It was important to disinfect everything that had to go into the abdomen—hands, sponges, and instruments. His hands and arms before every operation were carefully washed, first with soap, then with turpentine, then with a corrosive sublimate solution (1 to 2000), and after that with carbolic lotion. They were thus rendered thoroughly aseptic. His sponges after an operation were washed in cold water, and put in a soda solution for twenty-four hours. They were then soaked for some little time in a 1 to 20 carbolic lotion, after which they were dried, and kept so till they were required for the next operation. They were then put into a strong carbolic lotion, and from it into water recently boiled, from which they were squeezed dry before being used in the abdomen. With such antiseptic precautions there was no need of troubling about the spray. While believing that it did not aid much in disinfection, he did not agree with those who attributed to it poisonous effects when properly used. But he could speak of one case that was poisoned with carbolic acid, in the days before they knew how to use it, from a strong spray blowing right into the abdomen. There was now no danger of poisoning, but the spray was a bother. If it were of little use, away with it, to render manipulation more easy and rapid. Dr Maclaren, he was satisfied, need not trouble himself about the air further than to have good ventilation. He thought that as time went on the ideas on which the use of the spray was founded would become things of the past. As to the teaching of these operations, they were trying in Edinburgh to do something for students. It was an inconvenient matter to have too many breaths in the small rooms in which they had to operate, but they could easily get on with a dozen or so. He had done so in his operations, admitting students in rotation from the various clinics, and he last winter devoted three of the few clinical lectures which were at his disposal to laparotomy, hysterectomy, and the removal of the uterine appendages. A word about the removal of these latter. He was glad that Dr Maclaren had succeeded, even though the patient was still rather an invalid, in removing this tumour of the Fallopian tube. These tumours were very dangerous indeed. It was said they were not met with in post-mortems, but that was not the case. He had met with them, and they would be more frequently met with if looked for. They were slumped as peritoneal cases. They burst, and the examiner was satisfied if he found peritonitis, and did not look for pyo-salpinx. With regard to removal of the diseased ovaries, they who were convinced should, he thought, speak out on behalf of that class of women who were suffering agonies from such removable causes as dilated tubes and cirrhotic ovaries. He had satisfied himself from practical experience that these were removable causes. He was not afraid of the cry that the operation was being overdone. That objection could only be met by the conscientiousness and care of the individual operators. There were going about from doctor to doctor patients who suffered untold misery from cirrhotic or cystic ovaries or dilated tubes who could get rid of these troubles, and surely they should be told so, and have an opportunity given them of getting this done if they wished it. They formed a class of cases that had been successfully operated on by Mr Lawson Tait and many others, but who previously to Mr Lawson Tait's observations and labours were called ovarian neuroses, irritations, etc. These names would soon be things of the past. He had been surprised to find in every case of this kind in which he himself had operated that the pathological changes were much greater than the bimanual examination would have led him to expect. There was little good to be expected from the removal of one ovary. He had failed in one case to remove both from the difficulties of the manipulation. He had not had the courage to do it. That patient was not much better; but in all the others in which both were removed the result was very satisfactory. In many of them there was a good deal of irritation for some time in the cicatrix, but this went quite away in time. If he were Dr Maclaren, he would give the patient referred to in his paper the chance of having her other ovary removed, and he believed she would be then all right. It was a curious fact that about two-thirds of those who had both ovaries removed retained sexual feeling; the remainder lost it entirely.

Dr Foulis said, that after having followed Mr Lister from Glasgow to Edinburgh, and seen the spray used with the most magnificent results, and having seen two hundred cases of ovariotomy done without the spray with only ten per cent. of deaths, he was at one time staggered. Certainly both sides could not be right. He was as firm a believer as ever he was in the potency of germs to do mischief when they got into wounds. As long as the skin remained unbroken, pathological fluids which formed within the body like ascitic or abscess fluids did no harm by blood poisoning; but let those fluids be exposed for a short while to the action of the air, or the suspended particles, living or dead, in the air, the patients were in danger of pyæmia or septicæmia. For his part, he believed that this was due to fermentation of those particles or germs which entered the fluid. Was there then any means of destroying the germs or filtering the air of them, and preventing their access to wounds? The only means hitherto employed for doing so was the spray, and he would ask whether the spray had not been of the greatest service in altering their surgical results. Dr Macdonald had strongly remarked that the spray was of no use in ovariotomy. That was a useless bother, and interfered with the operator. He doubted whether it was advisable to abolish a method which experience showed had been of great service in ovariotomy. He questioned whether any ovariotomist had had such experience as Mr Knowsley Thornton with the spray. He was one of the youngest and most successful of operators. His percentage of deaths had lately been seven or eight, and he used the spray in the most thorough manner. He had never had a case of carbolic acid poisoning with the spray, and he (Dr Foulis) did not think that if it were used properly the spray could produce this poisoning. Dr Macdonald had operated with marked skill and success as yet, but he was struck in seeing him operate the other day by the fact that he breathed heavily right into the patient's abdomen. His breath might have carried myriads of germs in, some of them perhaps cholera germs. Why did not the germs in that abdomen come to life and give rise to blood-poisoning? He could not tell, but he was as convinced as he lived that if a knee-joint were opened and exposed to the air not under spray, the patient was in the greatest possible danger of dying of blood-poisoning; but let it be done carefully and scientifically, as Sir Joseph Lister did it, then there was no such danger; and if the spray could be used so, well, why should it not be used? This, perhaps, was not a point intended to be raised by Dr Maclaren, with whose results he was very much pleased. It was very remarkable that there should be so many operators for ovarian disease in all parts of the country. Every one was now operating, and what would be the state of affairs ten years hence, no one knew. Every one who tackled such cases as Dr Maclaren had done deserved to be encouraged by their appreciation of his results. As to the diagnosis of ascitic fluid, that was a matter very difficult to discuss on the present occasion. There were so many methods of diagnosis described. One was struck with the number of cases in which the abdomen was opened and no tumour found but wind or water. A tympanitic tumour should be easily diagnosed, but in other instances it might be necessary to distinguish by aspiration. After ten years of observations made on fluids withdrawn by the aspirator, he found that ovarian fluids never threw down a precipitate of a fibrinous character. An ovarian fluid was always a pure cellular secretion. An ascitic fluid was always the result of obstruction to the circulation, or of inflammatory action in the peritoneum, and ascitic fluids allowed to stand for a short time nearly always showed a precipitate with the character of a felted material under the microscope. If they tapped the patient and subjected the fluid to this test, two or three days would suffice to tell in cases in which there was any doubt. The deposit in ovarian fluids showed cellular, not fibrinous, elements under the microscope. He could not conclude without referring to the models, and stating to Dr Maclaren his opinion that he had made a very great advance in preparing these cysts for preservation. He should like to ask if Dr Maclaren had preserved hearts or other pathological organs in this way.

Mr Joseph Bell said that with reference to the anæsthetization of patients, he had adopted some time ago a method which he had seen recommended the other day by a German surgeon as something new. This consisted in the administration of an ordinary hypodermic injection of morphia and atropia a little while before the operation. The amount of chloroform required was much diminished. This was done as a matter of routine. Dr Foulis had started the much-vexed question of the spray, but he seemed to settle the matter for himself when he admitted that the myriads of germs expired by Dr Macdonald into his patients' abdomens never did them any harm. Since they were on the personal line, it might be interesting to note that Eberth of Zurich had proved the micrococcus of sweat to be a most active germ, succumbing neither through carbolic acid nor nitric acid. They all knew how the apostle of the spray was wont to perspire over a long operation, and they knew also how the sweat-drops used to fall through the spray into the open wound before him. Yet they never did any harm, although from Eberth's observations the spray could not have destroyed or enfeebled the micrococci in them. He was sure the spray was not of any benefit during ordinary surgical operations. Keith's observations should have convinced them that it was of no use in ovarian operations.

Dr Blair Cunynghame was struck by one thing, that it was not unusual even for so-called antiseptic surgeons to wear special coats in hospital. These coats were, many of them, covered with old blood-stains and discharges, yet their proximity to patients did not appear to do any harm. They also knew that menstruating women were at one time supposed to be the cause of the tainting of meat they touched.

Dr James said that some years ago he did a little work in connexion with the chemistry of various pathological fluids. He had then seen described a means of diagnosing between ovarian a ascitic fluids which was more rapid than that mentioned by Foulis. This was to observe the tension of the fluids throug bent tube connected with a manometer. The tube was attache a cannula in the abdomen, and while the tension of ascitic fluids w found to be about 6 or 7 inches, that of ovarian fluid was nearly dou

Mr Cathcart said, in reference to the preservation of the col of specimens, that he had found carbolic lotion (1 to 200), chlo and weak solutions of corrosive sublimate, act very well for so days. He would suggest, however, that it would be better t make a rough sketch of the tumour at once, and by means o this the artist would be able to get a better colour. He felt tha Dr Maclaren had thrown a new light on the preservation of suc tumours; but his method, he considered, was suitable only fo thin-walled cysts.

Dr Maclaren said he used ether in every case, because vomitin was much less common after it than after chloroform. The administration of ether used to be very tedious, but since Clover's apparatus had been used, it took no longer to anæsthetize the patient than it did with chloroform. The physiological evidence was that ether was a safer anæsthetic than chloroform. The ligature was, he thought, a most admirable way of dealing with the pedicle, and one felt much more at ease when there was a ligature rather than a seared edge. The carbolized catgut ligature checked bleeding, and did not destroy the tissues. As to the spray, his own feeling was that he did not do so well in hospital without it as with it. He was in an hospital the older part of which furnished most of the material for a prize essay on pyæmia. With the spray they hardly ever saw pyæmia. He was convinced that some germs could be admitted to wounds with impunity. Others were absolutely deadly. He had noticed that if he got a case of erysipelas in the ward, which was very rare, there were usually three or four wounds which were not being treated antiseptically. He had listened with great pleasure to a method of distinguishing between ascitic and ovarian fluids. The case in which he had opened the abdomen without having made the diagnosis was probably one of malignant disease of the peritoneum. Aspiration had been done, and the fluid examined microscopically, and only the occurrence of granular cells was noted. He had tried some of the preservatives mentioned by Dr Cathcart, with whom he agreed that the gelatine mode of preserving ovarian cysts was only applicable to thin structures which could be preserved in the dried condition.

2. *Dr Alexander Thom, jun.*, read his CASE OF LEFT FACIAL PARALYSIS WITH STRABISMUS, CONSIDERED CLINICALLY AND WITH REFERENCE TO THE LOCALIZATION OF THE LESION, which will appear in a future number of this Journal.

The President was much disappointed that there had been no post-mortem examination. The want of it rendered the case hypothetical, and took greatly from its interest.

Dr Alex. Bruce had agreed with almost every word Dr Thom had said as to the diagnosis. He thought he understood him to say that the case began with vomiting, and was followed by left internal strabismus, left facial paralysis, then weakness of the left side, followed by paralysis of the right arm and leg, and at an early period of the case there was some impairment of hearing and a certain amount of reeling, not due to the strabismus nor to the weakness of the limb, evidently, therefore, due to some cerebellar interference. He did not see, unless there was more than one lesion present, how the symptoms could be explained in any other way than that described by Dr Thom. The increase of galvanic reaction and diminution of the faradic, he should be inclined to understand as a partial and not complete reaction of degeneration. There were many cases in which the faradic reaction was absolutely absent and the galvanic reaction markedly increased, and where the contraction was markedly slow. The condition was due to this fact, that some of the nerve-fibres were left unimpaired, and consequently some of the muscular, so that they had not a complete absence of the faradic reaction, and not a complete development of the galvanic reaction. This might account for what Dr Thom described, and where the destruction of the nuclei of the centre was sufficient to cause almost complete paralysis of the muscle so far as its voluntary functions were concerned, and yet not to give a complete reaction of degeneration. He thought Dr Thom's view as to the seat of the lesion was borne out by the fact of the palate being involved, as also the sense of hearing, and an incomplete involvement of the centre was borne out by the reaction of degeneration not being complete—the lesion growing first downwards and forwards into the pyramidal tracts of the right side, and pressing these aside, and possibly causing some interference with their conducting power, and then relief being given, and by the tumour growing backwards to the right side, pressing on the right pyramidal tract before it had crossed, and causing the right-sided paralysis. It was much to be regretted that a post-mortem examination was not obtained. It was seldom that a case was described so accurately, and it would have been of great value to have had confirmatory evidence of the diagnosis.

Dr Foulis wished to mention a case that had come under his observation lately. In January 1884 a lady consulted him for pain in the left occipital region. A week after she fell into a deep sleep, out of which she awoke with all motor power abolished on the right side. She recovered, went to Moffat, enjoyed the summer, came home, and fell asleep for three days. After the administration of iodide of potassium, she remained well for some weeks.

Six weeks before death she fell into a deep sleep. Two well-known neuro-pathologists were consulted. One of these gentlemen diagnosed a tumour of the base of the brain in the region of the sella turcica, the other a tumour of the pons variolii. The lady recovered, and three weeks before death had no symptom of any kind; but three days before her death fell into a sleep and passed away. A post-mortem examination showed the brain healthy in all respects, except that in the substance of the left lobe of the brain, anterior to the left lateral ventricle, there was a cavity which would contain a duck's eggful of thin sanious fluid. The whole arch of the brain covering this tumour, and to the right side of the left frontal convolution, was a gliomatous tumour, and a portion of the right frontal lobe also formed a tumour. There was nothing at all in the regions where tumour was diagnosed. The symptoms he believed to be caused by the variations in pressure of the fluid in the cavity. There was nothing in the history except that ten years before she had an epileptic fit on the death of a niece. He mentioned the case to show how necessary a post-mortem examination was for the purpose of verification.

Dr Thom regretted that he had been quite unable to obtain a post-mortem examination. In reference to Dr Bruce's remarks, he had not called the symptom the reaction of degeneration, because he could not say that the contraction from the constant current was slowed, and also because it was recovered from under the faradic current after a time. Dr Foulis's case was another instance of what was well known, that serious gross lesions might occur in the brain without giving evidence of their presence.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLVI.—MEETING V.

Wednesday, 11*th March* 1885.—Dr CONNEL, *President, in the Chair.*

I. *Dr Angus Macdonald* showed the following preparations:—

1. FIBROID ENUCLEATED FROM THE POSTERIOR LIP OF THE CERVIX. —The first preparation represents what was at one time a fibroid tumour connected with the posterior lip of the uterus. It must have been growing for a long time, and yet the patient had not experienced any trouble from it till a few weeks before she applied for admission. The leading symptoms were those of down-bearing and retention of urine. On examination a tumour nearly the size of a child's head was found filling the vagina. It looked like a large fibroid polypus. But on chloroforming the patient it was found that the outer surface of the tumour was continuous in all directions with the bladder except for a small portion anteriorly. Then it passed into a cavity which just admitted the tip of the forefinger. The sound entered here 2½ inches into a hard body

like the uterus, which projected into the abdomen above the brim. The uterus itself was clearly not fibroid. The tumour was removed first by cutting into it, and breaking it up piece by piece, until the finger could be pushed through the centre to the base of the mass where it was completely enucleated. Into the bottom of the sac a plug of cotton wool, previously saturated in styptic colloid, was inserted, and the vagina plugged with pieces of cotton wool steeped in carbolic solution. These were removed next day and the vagina washed out with an antiseptic solution. There was no hæmorrhage. The patient left the hospital a week after the operation, the cavity having disappeared, and the uterus having gone back to its natural site. The fragments weighed 1 pound 14 ounces. The preparation is shown to the Society because it is rare to find so large a fibroid growing from the cervix alone—fibroid tumours usually affecting the body of the uterus. Such a tumour must have seriously interfered with delivery, but it could of course have been enucleated, and thus got out of the way.

2. ENTIRE UTERUS REMOVED BY VAGINAL METHOD FOR CANCER.—The specimen shown represents the uterus of a patient suffering from cancer, removed by the vaginal method on Monday, 23rd February 1885. The cancer was restricted to the uterus. The uterus was movable to a considerable degree. There was some old contraction in the left broad ligament. The method adopted was first to depress the uterus with volsellæ, free the vagina from the cervix by the knife, and reflect the bladder with the fingers from the part of the cervix up to the reflection of the peritoneum from bladder to uterus. Then the posterior vaginal wall was separated by knife, and Douglas's pouch exposed and then opened. The base of the broad ligament on both sides was then first tied in position with strong silk, and divided until the finger could be easily passed over the top of the left ligament, when the anterior pouch of peritoneum was opened, and the upper part of the left broad ligament was transfixed and tied firmly in two portions, and finally separated from the uterus. This allowed the uterus to be pulled sideways outside the vulva, and the remaining upper half of the right broad ligament to be transfixed and firmly tied in two portions. All risk of cancerous infection from inversion of the connecting stump upon the peritoneum were thus avoided. The ligatures on the left side inserted into the lower end of the broad ligaments were rubbed off in removing the uterus, and caused slight bleeding, which was readily averted by transfixing the mass and retying. The ligatures were tied together, right and left, in two bundles and drawn out. There was very little bleeding. The opening in the peritoneum was not drawn together, but the vagina was plugged with iodoform wool. The patient did excellently for two days. There was very little shock and no peritonitis. But on the third day—apparently in consequence of some carbolic oil having been put on a small iodoform plug that was used—

sepsis set in, and the patient died twenty-four hours afterwards. There was no injury to either bladder or ureters, as plenty of water was passed by the bladder, and its colour was natural. It seems to me that the difficulty of this operation, as well as the amount of shock expected to follow it, are somewhat exaggerated in the professional mind.

3. UTERINE FIBROID IN ANTERIOR WALL.—The third specimen is that of a bleeding fibroid growing from the anterior wall of a uterus, removed on Saturday, 28th February 1885. The tumour is remarkable for the way in which it has developed forwards so very markedly—growing at the same time downwards so as to encroach upon the cervix and bladder. The cervix was very short. But as the patient had nearly bled to death at the menstruation immediately preceding the operation, and was, moreover, very anxious to be operated on, I granted her her request. There was some trouble in keeping the wire of the clamp above the edge of the bladder. There was also some trouble in getting the tumour hoisted out of the pelvis, into which it had got wedged. But ultimately a workable pedicle was obtained. The patient has uninterruptedly done well.

4. FŒTUS DELIVERED BY CRANIOTOMY AND BASILYSIS AT THE ROYAL MATERNITY.—The mother of this child presents an extreme example of the flat rickety pelvis. The conjugate at the brim is not over 2½ inches. The patient was delivered by basilysis, by Dr Croom, two years ago nearly. She was sent into the Maternity by Dr Stewart Stirling, who had applied forceps and failed. She had been eighteen hours in labour before coming to us. The head had not attempted to enter the brim, but rolled over the inlet, the sagittal suture parallel to the transverse but near the promontory, occiput towards the left. Cervix fully dilated. I resolved to perforate. This was easily accomplished, but it was difficult to break down the skull with forceps owing to the small size of pelvis and high position of the head. After considerable progress was made in comminuting the skull the basilyst was used. It was very difficult to screw it home, as the part of the head entered became oblique. It fixed in the left temporal and broke it up. The head could thus be pulled through with the crotchet. It was very difficult to make the shoulders pass. The patient did well.

II. *Dr Hewetson's* communication, NOTES ON A CASE OF FACE PRESENTATION, WITH PECULIAR ATTITUDE OF THE FŒTUS, was then read by the *Secretary*. It will be inserted in a future number of this Journal.

Dr Peter Young thought that this case was undoubtedly one of a primary presentation of the face. The cause was not quite obvious. Sir J. Y. Simpson and Dr Keiller had described cases in which enlargement of the thyroid gland was the cause. He thought that in this, as in all face cases, the proper treatment would have been turning. The peculiar position of the arms was not, in his opinion, a contraindication, as they would have gone up over the head, as in an ordinary case. Dr Hewetson was, however, to be congratulated on the successful result of his treatment.

Dr Wilson had had no face cases in which interference was necessary. He agreed with Dr Young that turning was to be preferred to forceps.

Dr Angus Macdonald had seen only few cases in which he required to interfere. Face cases were extremely rare, and all of those which he had observed terminated naturally. He thought that the essential principle to guide the obstetrician in his mode of interference was the character of the pelvis; if the pelvis be roomy, let the case alone; if it be rickety, then turn.

Dr Underhill said that the Society must congratulate Dr Hewetson on this, his first paper. The difficulty in the case was entirely due to the position of the arms. He thought that the prominence of the thyroid which had been referred to might be a result, and not the cause of the position of the arms. In an umbilical hernia a similar backward displacement of the legs was sometimes present.

III. *Dr Skene Keith* read a communication on THE METHOD OF HOLDING SIMS' SPECULUM, which will be found at page 1103 of this Journal.

Dr Angus Macdonald thought that this paper was of great practical value, as it was undoubtedly difficult to have the speculum held in a satisfactory manner. He would have liked that Dr Skene Keith had referred to the mode of introducing it, which was also a point of importance. A self-retaining form of this speculum was a desideratum.

Dr Barbour found Sims' speculum rather long in the blade, and that sometimes the best view was obtained when the blade was not pushed into the handle. He thought it was an advantage to hold the speculum obliquely with regard to the raphe of the perineum, so as to keep up the upper labium with it.

Dr Underhill thought that matters of practical detail such as were brought forward in this paper were of great importance. He agreed with what was said as to the desirability of not pulling down the cervix.

Dr Skene Keith, in reply, said that he thought this matter of holding the speculum was of some little importance; he had not referred to the mode of introducing it as it did not belong to this question. No self-retaining speculum could be contrived, as it could not be fixed to the patient's person, and when fixed to the couch was displaced on the slightest movement of the patient. He did not agree with what Dr Barbour had said; the speculum should be drawn straight back, not obliquely.

IV. *Dr Freeland Barbour* then read his paper on SOME PRACTICAL

POINTS WITH REGARD TO THE MEMBRANES IN THE THIRD STAGE OF LABOUR, which will be found at page 1086 of this Journal.

Dr James Ritchie said that it was not evident why the placenta did not separate as well as the rest of the decidua.

Dr Peter Young thought that Dr Matthews Duncan's description of the mode of the delivery of the placenta was now generally accepted, and that Dr Barbour's explanation of how this occurred was satisfactory. He thought, however, that Schultze's description might hold for exceptional cases when there was atony of one portion of the uterine wall; he had satisfied himself of its occurrence in some cases in which the placenta was undoubtedly attached to one wall of the uterus, and not to the fundus. Succenturiate placentæ were, in his experience, more common than was generally held, and they usually came away easily.

Dr Angus Macdonald had listened with great pleasure to this accurate, interesting, and scientific description of the relation of the membranes, and the method of their separation. The most original part of the paper was that which dealt with the separation of the placenta, as it upset all our previous notions on this subject. He doubted whether the attachment of the placenta to the uterus was so strong as this implied. The part of the paper which dwelt on the great importance of examining the membranes carefully was quite right, and above praise. Ahlfeld had shown how infection from without had been reduced to a minimum; but there was a source of infection from within which cannot be guarded against; and through ignorance as to this, obstetricians were often blamed for results which lay largely beyond their control. These bad results would only be guarded against by great care in the management of the third stage. He agreed with Dr Barbour that we should not be in too great a hurry; undue hastening of this stage leads to hæmorrhage, which would not occur if the uterus were allowed time to rest. There was one small point not referred to in the paper, viz., that in pulling on the membranes, the traction should be in the direction of the axis of the uterus.

Dr Underhill referred to the importance of having precise anatomical detail as the basis for practice. It is only by papers such as this that we get the accurate ideas which should guide our practice. There were two points which this paper did not take account of: The difference in the shape of the uterus during the third stage in different cases, which would affect the separation of the placenta, and the fact that there was often bleeding before the placenta came away.

Dr Freeland Barbour, in reply, explained that the foldings of the amnion were so minute as to be recognised only by the microscope. It was a common occurrence for the amnion and chorion to come away apparently adherent throughout, but these minute folds might be present in that case also. This separation of the amnion and chorion was not of great practical importance, except

as showing that the adhesion between these membranes was so slight that the difference in their elasticity was sufficient to separate them. The separation of chorion along with the decidua through the spongy layer of the latter was, however, of great practical interest. Although the folds were visible to the naked eye, the separation was only partial, and the lacunæ thus produced microscopic. Why the placenta did not separate he was unable to say, but there was no doubt that it was not separated in the preparations he had described; this was the fact which had struck him most forcibly in these specimens, and it was borne out by the examination of others; it was one of great practical importance.

Part Fourth.

PERISCOPE.

SURGICAL PERISCOPE.

By A. G. MILLER, F.R.C.S.E.

ANATOMY OF SPINA BIFIDA: A lecture by Prof. Humphry of Cambridge.—The lecture was the result of the learned professor's surprise at the difference of opinion that exists among surgeons on the subject. The facts which he gives are the result of an examination of the specimens in most of the pathological collections in London, and some recent specimens from Dr Goodhart and Mr Stewart. The following are what we consider the main points in the lecture:—The middle part of the posterior wall of the sac forming the prominent swelling in spina bifida is thin, translucent, and membranous or cicatricial in appearance. The spinal cord is usually blended with or attached to this membrane. The sac is generally shut off from the arachnoid space, and in Prof. Humphry's opinion is most likely developed from a subarachnoid lymph space. The formation of the cauda equina, by the proportionate greater rate of growth of the vertebræ, is prevented in spina bifida (in the lumbo-sacral region) by the attachment of the cord to the upper part of the sac. This demonstrates that the abnormal relation is formed at an early period of fœtal life. From the same cause the lumbar and sacral nerves pass more or less transversely outwards. Prof. Humphry states that the formation of the fluid in the sac may be the result of an inflammatory process, and may cause the non-closure of the spinal canal; or the non-closure may be the primary cause. He inclines to favour the former view. Prof. Humphry recognises three varieties, which he describes as follows: —1. *Hydrorachis externa* anterior, the common spina bifida described above where the spinal cord is adherent to the posterior wall. 2. *Hydrorachis externa* posterior, or *Hydro-meningocele*, in which the cord is not attached posteriorly, but anteriorly to the bodies of the vertebræ. 3. *Hydrorachis interna*, or *Hydro-myelocele*, in which the fluid accumulates in the central spinal canal. The great practical points bearing on treatment are, of course, the attachment of the cord to the posterior wall, and the frequent shutting off of the sac of the spina bifida from the arachnoid cavity. In regard to these Prof. Humphry says,—"I say nothing about other exceptional varieties of spina bifida, such, for instance, as where there is cleavage of the bodies of the vertebræ, bony growths from them into the vertebral canal, and other malformations. I have directed your attention chiefly to the more ordinary forms of spina bifida, the anatomy of which has acquired increased importance from the reintroduction of the treatment of the abnormality by injection. With reference to this treatment, you will understand that it is better to introduce the needle, not in the mesial line, especially in the upper part, where the cord is almost certain to be connected with the wall of the sac, but on one side. Further, you will perceive that the separateness of the cavity of the sac from the cavity of the spinal arachnoid, in most instances, is some security against the direct passage of the injected fluid into the latter cavity, and that the advantage of Morton's fluid, as an injection, probably depends upon the addition of glycerine to the iodine and iodide of potassium, lessening the liability to the diffusion of those irritating substances through the delicate lining of the sac into the surrounding subarachnoid tissue."

CASE OF GUNSHOT INJURY OF THE INTESTINES SUCCESSFULLY TREATED BY LAPAROTOMY AND SUTURE OF THE INTESTINES. By William T. Bull, M.D., New York (from *Medical News* for 14th Feby. 1885).—*Case*—Wm. M'E., æt. 22, truck driver. Shot accidentally with a pistol; ball entering an inch and a half below and to the left side of the navel. On admission, patient was conscious, warm; pulse 96; temp. 97°·8; respirations 18. He had vomited (food) once, retched frequently, and complained of pain all over abdomen, and tenesmus. Abdomen tender, not tympanitic; wound half-inch in diameter; blackened edges. *The wound was not probed.* A dressing of iodoform gauze and borated cotton was applied after thoroughly washing the skin with carbolic lotion—2½ per cent. One-sixth of a grain of morphia was injected hypodermically. Patient was brought into hospital at 10 P.M. on 2nd Nov. 1884, and the operation of laparotomy was performed at 5·30 P.M. on the following day (no explanation is given of this delay). Two carbolic sprays were made to play in the operating room for two hours previous to the operation, and the room was heated to 80° F. Sponges, towels, instruments, and hands were purified in a warm 5 per cent. solution of carbolic acid. A 2½ per cent. solution was used afterwards for sponging out the abdominal cavity. Laparotomy was performed in the middle line, the incision extending from the umbilicus to the pubes. On opening the peritoneum two pints of bloody serum flowed out. The intestines and mesentery were seen to be coated with clots and flakes. The coils were not adherent. Seven penetrating wounds of the intestines were found, and the bullet lodged in the wall of the sigmoid flexure. There was no fæcal extravasation, the mucous coat of the bowel bulging out, and plugging the apertures. Whenever the wounds were touched, "yellow fæces of the consistency of gruel" escaped. Each wound was treated in the following manner. The mucous membrane was inverted, and the round aperture made into a slit, transverse to the length of the gut, by drawing it out with two blunt hooks. The edges were then closely approximated carefully by five or six sutures inserted according to Lembert's method. Two of the wounds, which were close together, were made into one opening, and required twelve sutures. After washing out the peritoneal cavity with 1 to 40 solution of carbolic acid, the bowels were returned, and the central incision closed with silk (deep) and catgut (superficial) sutures (the external bullet wound being treated in the same way), and dressed with iodoform and borated cotton. The operation lasted two hours. Ether was administered. Patient very nearly died; artificial respiration and elevation of the limbs being necessary to restore animation. The patient ultimately recovered, and was exhibited before the New York Surgical Society on 27th January 1885, apparently in perfect health.

SPINAL ARTHROPATHIES.—The following are the "practical deductions" from a paper by D. A. Sidney Roberts, Philadelphia, reported in the *Medical News* for 14th Feby. 1885.—The practical deductions to be drawn from a clinical study of the above somewhat anomalous cases may be briefly summarized as follows:—*Period of Development.*—1st, The tabetic arthropathies may occur independently, or precede the active symptoms of locomotor ataxia. 2nd, They occasionally develop suddenly, late in the course of a posterior spinal sclerosis. *Nature of Lesions.*—The peripheral expression of central nerve irritation is characterized by the following changes found in the structure of the various articulations:—1st, A chronic asthenic hyperæmia of the synovial membranes; a hydrarthrosis. 2nd, An interstitial atrophy of the epiphyses. 3rd, A fungous or rarifying epiphyseal hypertrophy. 4th, The formation of osteophytes and bony stalactites. These various joint expressions characteristic of the spinal arthropathies may exist separately, but are usually combined in the same subject. *Differential Diagnosis.*—They may be readily distinguished from the common inflammatory lesions of the epiphyses by the total absence of the reflex neural phenomena—*i.e.*, of pain, both reflex and local, the apprehensive state regarding joint movements, and the reflex or tetanic spasm of the muscles, always associated with joint arthritis. Abscess is never directly associated with the arthropathies, unless incident upon direct traumatism. They are more difficult to differentiate from malignant disease of the articulations; but a careful inquiry into the history and course of the lesion, and the presence or absence of central disturbance, are our most reliable guides. *Course.*—The progress of the arthropathies is essentially chronic. Occurring, not infrequently, early in the history of the tabetic lesion, they slowly increase, with occasional exacerbations, and years elapse before fully matured. A rapidly developing arthropathy may be associated with the later stages of an ataxia. Their course is self-limiting, though never reparative.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary; Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Leucoderma Syphiliticum.—Gustav Riehl in the main supports the views of Neisser regarding this curious condition of the skin in the syphilitic. It consists in the development of white patches on the skin of the neck, on the places where a specific macule or papule has been situated, and also on parts of the same region where no such lesion had existed. While the back and side of the neck are the special localities, the white patches have also been seen on the trunk, the extremities, and even on the face. Either the whole space previously occupied by a macule loses its pigmentation, or, in the case of a papule, the periphery becomes white first, a remnant of the dark brown infiltration persisting for a time in the centre, but finally being also absorbed. The skin between the leucodermic spots is more deeply pigmented than normal. Usually the white patches enlarge, and thus all but unite with adjoining ones. After lasting for some weeks the pigment begins to be restored, and is completely so in course of from eight to eighteen months. During the whole process no other changes take place in the epidermis or corium; there is no trace of infiltration or reddening, no noticeable desquamation or alteration of glandular secretion. In the larger majority of cases this condition occurs in women. Though usually associated with the early macular or papular syphilide, it does occur in the later stages. As compared with idiopathic vitiligo there is nothing which can with certainty distinguish a single patch; but the arrangement, the included remnant of a papule, as well as the localization and the course pursued, will enable a decision to be arrived at. The term pigmentary syphilide is a misnomer; there is a misplacement of pigment, not a mere increment. As to the cause, Riehl points out that there is no overgrowth of the rete cells, as Neisser supposed, nor does chrysarobin cause overgrowth of the rete and subsequent pigment atrophy, but rapid renewal of the rete in psoriasis patches, which subsequently become white. For the present the proof of the direct connexion of the process with syphilis must be regarded as incomplete, and the occurrence of leucoderma like that of pigmented cicatrices is only presumptive evidence of syphilis.—*Medizinische Jahrbücher der K. K. Gesellschaft des Ärzte*, 1884.

DERMATITIS HERPETIFORMIS.—Duhring has observed a case of this during thirteen years. The patient, at the age of 28, began to suffer from attacks of the complaint. It first showed itself as an erythematous eruption extensively diffused over the surface, and accompanied by violent itching. The attack was described as having possessed all the features of an urticaria. It subsided in the course of three or four days. In the subsequent attacks, which lasted a longer but a variable time, four different kinds of lesions manifested themselves, either together or separately. There were true pustules, containing from the beginning a whitish puriform fluid, and of various sizes; vesicles also of different sizes, and containing a clear yellowish fluid, blebs, and papulo-vesicles, acuminate in form, and exuding a little gluey fluid. The vesicles and blebs on every occasion of their appearance itched much; the pustules itched but little. The vesicles and blebs grew rapidly, and were accompanied with but slight inflammation about their bases; the pustules were always markedly inflammatory. One attack had scarcely subsided when another appeared. The lesions frequently inclined to come out in groups and clusters. The face, neck, elbows, knees, sacral region, and buttocks were the favourite localities; the genitals, hands, and feet have generally been free; the palms and soles have always escaped. Though dark red pigmented marks persisted some time, no scars remain. In the case of the mature pustules the inflamed skin round tended to pucker and become wrinkled. The man was at first weak, tremulous, and dyspeptic, but latterly his health improved. The disease may be confounded with eczema, herpes, or pemphigus, according to the lesions at hand.—*New York Medical Journal,* 15th November 1884.

Dr Robinson describes and figures a case of the same disease. He, however, prefers the term hydroa to dermatitis or impetigo herpetiformis, pemphigus hystericus, and herpes gestationis, under all of which names cases very similar have been recorded. He thinks that the skin lesion is not a simple, local, idiopathic affair, but the result of some disturbance more general and deeper seated, but whose nature we do not yet understand. As a consequence the skin lesion must vary in accordance with the intensity and duration of the action of the producing agent, as well as from the ability of the skin to withstand the injury, and as a result we may have a papular, vesicular, pustular, or bullous eruption, the arrangement of the lesions depending upon the nervous system, and thus giving the herpetiform character generally observed.

In the case he relates the eruption affects a boy aged 10, of healthy parents, who had some months previously an attack of joint rheumatism. In his case the forms assumed are papules, vesicles, or bullæ, and, as in Dubring's case, the palms and soles remain free. The whole eruption was characterized by the grouping of the lesions, their arrangements in annular form or circles as in ringworm, in consisting of papules, vesicles, or bullæ, by intense itching, and by marked pigmentation on their disappearance. The pigmentation was due to the escape of hæmoglobin into the tissues as a result of scratching.—*Journal of Cutaneous and Venereal Diseases*, January 1885.

ETIOLOGY OF TRICHOREXIS NODOSA. — Wolffberg, from observation in his own case and in another, believes that simple too rough friction with a hard towel is the cause of this, the hair of some persons and not of others being liable to partially fracture. The inefficacy of the treatment by lotions, etc., while it has sometimes been removed by shaving, favours the mechanical origin of the disease.—*Deutsche Med. Wochenschrift*, 31st July 1884.

TREATMENT OF RINGWORM OF THE SCALP. — Alexander recommends a ten per cent. solution of chrysarobin in traumaticine as the best mode. The hair is closely cut or shaved, the scalp thoroughly cleansed, and the hairs on the patches, and for a little space round, epilated. On the clear, bald spot thus left, a layer of the pigment is applied with a stiff brush. Nothing is then done till the artificial cuticle begins to crack, or until the growing hairs push their way up through it. The application is then renewed, and repeated twice or thrice a week. Pustular dermatitis was occasionally set up, when the employment of the paint was suspended. No true kerion was, however, produced.—*Journal of Cutaneous and Venereal Diseases*, February 1885.

THE ELIMINATION OF TUBERCLE BACILLI BY THE SKIN.— Some investigations, recently undertaken by Dr A. Severi, into one of the possible modes of contagion of tuberculosis, are worthy of more than a passing mention, by reason of their importance from a prophylactic point of view. The subjects of the investigation were three women, suffering in an advanced stage of phthisis, and whose sputa contained numbers of bacilli. The author's labours were first directed to a differentiation of tubercle bacilli from the micro-organisms found by Bizzozero in the epidermis of healthy individuals. The method employed was that used by the latter in his researches. The epidermis is delicately scraped off from various parts of the body, especially of the arms and anterior part of the chest, and the scrapings are then heated on a glass slide, all fat particles are dissolved away by chloroform, and the residue is strained in the ordinary manner. To assure himself that no bacilli were deposited on the skin from the air, the author had the arm washed with hot soap and water, then with ether, and finally with a one per thousand sublimate solution. It was then dried with carbolized gauze, covered with rubber tissue washed in the sublimate solution, and over all a carbolized cotton dressing was applied. At the end of two or three days this dressing was removed, and the arm scraped, in the manner above described, with a knife washed in a five per cent. carbolic solution. In each instance Dr Severi obtained the tubercle bacillus, and often in considerable numbers, especially after the patient had perspired much during the night. The fact that the bacilli were most numerous after profuse sweating led the author to the belief that they were probably eliminated through the sweat-glands. It is to be hoped that these investigations will be repeated, and, if the results announced by Severi are verified, it would seem to be the duty of the medical attendant to see that the night clothes and undergarments of phthisical patients are so heated as to effectually destroy the micro-organisms contained in them.—*New York Medical Record*, 28th March 1885.

ERUPTION CAUSED BY THE EXTERNAL APPLICATION OF IODOFORM.—Neisser has observed within a brief period seven or eight instances in which the external application of iodoform has occasioned an erythematous affection, characterized by the formation of small vesicles, and bearing a resemblance to acute eczema. The disease may be defined as an acute dermatitis, the evolution of which is largely connected with personal idiosyncracy. The degree of development attained depended on the duration of the drug action and the frequency of its repetition, even a single application sufficed to evolve the morbid process in all its intensity. The same results were found to follow from the use of every kind of iodoform, and however applied, yet no such effects were produced, even in the most susceptible subjects, by the *internal* administration of the drug. The iodoform eruption possesses no special features by which it can be recognised at once without a knowledge of its exciting cause. Two patients each suffered for years from a tormenting eczema of the anus and perineum—not the chronic form of eczema with infiltration, but a frequently recurring and peculiarly obstinate acute eruption. In both, the disease had been caused by the introduction of iodoform suppositories for the relief of rectal disorders. This fact being ascertained, their sufferings were easily ended. In two cases of females similar eruptions broke out over the inner surface of the thighs, whenever iodoform had been applied to the vaginal orifice. In the treatment of this complaint reliance must chiefly be placed on cold fomentations, with a five per cent. solution of acetate of alumina, or washings with a two per cent. carbolic spirit, followed by sprinkling powders. Of course the patient must have nothing more to do with iodoform.—*Deutsche Med. Wochenschrift*, 24th July 1884, and *Journal of Cutaneous and Venereal Diseases*, Feb. 1885.

KRANKENHEIL SPRING SALT SOAP.—Messrs C. F. Höfler, Bilston, have sent us, through their agent, Mr D. N. Wylie, 1 South College Street, some specimens of soaps, in which are incorporated the salts obtained by evaporating the mineral waters of Krankenheil, a well-known spa in the Bavarian Alps. These waters contain a large proportion of carbonate of soda (more than 41 per cent.), 20 per cent. of chloride of sodium, and 10 per cent. of the sulphates of soda and potass, with a small amount of iodide of sodium, as constituting the solid residue of salts. There are three sorts of soap so made. No. 1, iodide of sodium soap, is an excellent toilet soap; with the Edinburgh water it cleanses well and yet leaves the skin pleasantly soft and cool. No. 2, iodide of sodium and sulphur, is a stronger soap, and has been recommended in some chronic skin eruptions; and there is a still stronger, No. 3, iodide of sodium and sulphur. How far the advantages of the mineral waters can be obtained by the use of such soaps has not been quite determined, but these will be found agreeable for toilet use, and are very slightly perfumed.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. MILNE CHAPMAN, Inverness.

ON COMBINED TURNING IN THE TREATMENT OF PLACENTA PRÆVIA (by Richard Lauer, M.D., *American Journal of Obstetrics*, Dec. 1884).—The writer strongly advocates the treatment of cases of placenta prævia by turning by Braxton Hicks's method of combined external and internal manipulation, and founds his paper on his own cases, Hofmeier's, and Behm's. He says, "Hofmeier was the first who adopted Braxton Hicks's method in hospital practice. Before him single cases treated thus had been published, but they made no impression. Hofmeier supported his assertions with large number; he proved by facts that the expectations Braxton Hicks had brought forward on this subject were confirmed by practice at large. Next Behm, influenced by Hofmeier's success in the treatment of placenta prævia, adopted the method in a large series of cases. His results were brilliant. Hofmeier gathered his experience on this subject in the polyclinic of the University Hospital for Women of Professor Schroeder in Berlin. He operated on all his cases himself. Behm's cases came from the midwifery department of the Charité Hospital in Berlin, superintended by Professor Gusserow. He also operated on all the cases himself. The cases at my disposal occurred in the polyclinic of the University Hospital for Women in Berlin, the same institute which furnished Hofmeier's cases. They begin at the time the latter end, and were operated upon by the different assistants who have been on duty in the hospital since. I am indebted to Professor Schroeder for kindly allowing me to publish the valuable material of his clinic in this paper. The material I am able to lay before the profession has special value on account of its uniformity and of the large number of cases. The fact that the latter were observed in the course of a few years in the same city, and treated mostly according to the same method, gives a special importance to this collection. The combined results of Hofmeier's, Behm's, and my cases are—

	No. of Cases.	Deaths.
Hofmeier's . .	37	1
Behm's . .	40	0
My own . .	101	7
	178	8 = 4·5 % mortality."

The procedure he advises is as follows:—"Turn by the bimanual method as soon as possible, pull down the leg, and tampon with it and with the breech of the child the ruptured vessels of the placenta. Do not extract the child then, let it come by itself, or at least only assist its natural expulsion by gentle and rare tractions. Do away with the plug as much as possible; it is a dangerous thing, for it favours infection, and valuable time is lost with its application. Do not wait in order to perform turning until the cervix and the os are 'sufficiently dilated to allow the hand to pass.' Turn as soon as you can pass one or two fingers through the cervix. It is unnecessary to force 'your fingers through the cervix' for this. Introduce the whole hand into the vagina, pass one or two fingers through the cervix, rupture the membranes, and turn by Braxton Hicks's bimanual method. Use chloroform freely in performing these manipulations. If the placenta is in your way, try to rupture the membranes at its margin; but if this is not feasible, do not lose time; perforate the placenta with your finger, get hold of a leg as soon as possible, and pull it down. Up to this moment the treatment is an energetic, active one. Experience shows that flooding now ceases. The next part of the treatment is of an expectant nature. A quick extraction now would cause rupture of the cervix and fatal post-partum hæmorrhage. Wait, therefore; give the patient time to rally her powers; wait until pain sets in, and then assist by exerting slow and gentle tractions. If the child is in danger during this time, let it run its risk, let it die if necessary, but do not endanger the mother by quick extraction. Cervical laceration is always a dangerous thing; it is particularly dangerous, however, in placenta prævia, on account of the great vascularity of the tissue of the cervix, and its liability to rupture. Atony of the uterus is also a disagreeable complication, especially in cases of placenta prævia, where there generally is not much blood to lose. Both these dangers may be got rid of by an expectant treatment after turning. Pains generally set in quickly, the cervix distends rapidly, and the child is born generally between one and two and one-half hours after turning." In regard to the child's chances he says,—"1st, The prognosis for the child, being in all events bad in placenta prævia (premature labour, anæmia of the mother, disturbed circulation in the placenta, abnormal presentations of the child, prolapse of the cord, and operations necessitated by such presentations). 2nd, The value of the mother's life being incomparably greater than that of the child, it is not right to allow the mother to run even the risk of fatal hæmorrhage in order to save a child's problematic life. 3rd, Our results being not worse for the children than those hitherto obtained; our results being, on the other hand, surprisingly good for the mothers, we have a right to claim superiority for our manner of proceeding."

ANTEFLEXION OF THE UTERUS AND ITS ASSOCIATED PATHOLOGICAL CONDITIONS: THEIR PREVENTION AND TREATMENT (by W. Gill Wylie, M.D., *Ibid.* Sept. 1883 and Dec. 1884).—The writer sums up a very thoughtful and interesting paper with the following conclusions:—1st, There is undoubtedly a certain number of cases in which a marked degree of anterior curvature gives us painful symptoms. 2nd, Anterior displacements are the result, rather than the cause, of pathological changes in the uterus; they may add to, and sometimes intensify, disease, but are rarely, if ever, the primary cause. 3rd, Dysmenorrhœa with anteflexion is rarely, if ever, chiefly and directly due to the flexion, but the latter in some cases may aggravate the pathological conditions, which are the real cause of the pain. 4th, The attempt to correct anterior displacements by the use of pessaries is rarely, if ever, sufficient to effect a cure, unless the cervix is dilated at the same time, and other pathological conditions are treated. The use of mechanical supports may give some relief, but they are merely palliative, and as used by many, they frequently do harm. 5th, The true morbid condition of the uterus in most cases of anteflexion is one of imperfect development, while the uterine canal is more or less stenosed by the degenerate and contracted state of the uterine tissues, and the mucous lining is degenerate and atrophied, often hyperæsthetic, especially in that part of the organ where the circular fibres are most powerful and contracted at the os internum. 6th, If the above is true, the treatment obviously would be to stimulate development by improving the general health, and by the local use of electricity, to relieve the stenosis by dilatation or division and divulsion, to perfect the drainage, and bring about a healthy condition of the mucous lining.

THE TREATMENT OF MASTITIS BY BANDAGING AND REST. P. A. Harris, M.D. (*Amer. Journ. of Obstet.*, Jan., Feb., 1885).—From the author's experience in the management of the puerperal and nursing breast, he formulates the following conclusions:—1*st*, That the breasts, soon after delivery, are strongly disposed to secrete milk, and will usually continue to do so for a few days, even if they be not nursed. If no attempt be then made to nurse or withdraw the milk, the secretion rapidly diminishes, and they return to their normal size and condition of activity. *2nd*, That, as a rule, (to which there are probably few if any exceptions), the retained secretion does not undergo changes which convert it into an irritant fluid, but instead, it remains innocuous to the walls of the ducts and acini which contain it, and under favourable conditions is finally absorbed without trouble or embarrassment to either the normal or inflamed adjacent tissues. *3rd*, That, as a rule, the secretion of milk continues only while the natural stimulus, as nursing or other means of emptying the breast continues to be employed; that the secretion, either in the normal or inflammatory condition, begins to abate when such stimulus is withdrawn, and will entirely cease after a week or two. *4th*, That an abundant secretion of milk which has recently and entirely ceased as the result of a complete withdrawal of stimulus may be again recalled upon the reapplication of the child. *5th*, That the presence of a decided inflammatory movement in the breast greatly diminishes secretion in the gland. *6th*, That the sympathetic relation between the two breasts is almost, if not wholly, a sensory one. That neither the function of secretion nor the condition of the circulation in one breast is appreciably and directly affected by either physiological or pathological processes which may be going on in the other. *7th*, Inflammation of the breast should be regarded as a progressive rather than a self-limited disease. *8th*, The inflamed breast should be supported in a well-applied bandage, and no attempt made to nurse or withdraw the secretions until the entire subsidence of the inflammatory movement. *9th*, Sore and fissured nipples often produce inflammation of the breast. If, therefore, in any particular case we have reason to believe that the lesion will soon lead to the development of mastitis, or should it appear that a cure cannot be effected during the continuance of nursing, we shall be justified in the entire suspension of suckling through the affected part until a cure of the local trouble is established.

ACUTE PANCREATITIS DURING CHILDBED. Haidlen (*Centbl. f. Gynäk.*, No. 39, 1884).—The writer details a case where there were attacks of abdominal pain during the 7th, 9th, and 10th months of pregnancy, which, with other symptoms, led to the belief that perforation of the bowel was imminent. During the puerperium there were two similar attacks, and 5½ weeks post-partum a third of greater intensity, unattended by rise of temperature, and with slight vomiting. The pain was localized to the neighbourhood of the pylorus, and required the use of morphia. On the following day great collapse set in, followed by death, after an illness of 96 hours. On post-mortem examination, the sole pathological change that was discovered was in the pancreas, which was enlarged and almost entirely converted into a brownish-red mass, with on its outside a small blood-clot. There was no perforation of stomach or intestine found. Prof. Ziegler, who undertook the microscopic examination, reports that the pancreas was in a condition of acute inflammation with hæmorrhage into its substance.

IS ERYSIPELAS COMMUNICABLE FROM MOTHER TO CHILD DURING PREGNANCY. Kaltenbach (*Ibid.*, No. 44).—The writer relates a case where delivery ensued 15 days after an attack of acute erysipelas. Delivery was at time, and the child was mature, and born alive. On the head, neck, and thorax, the epidermis was loosed in large scales, and on the next day a similar condition developed in the lower part of the body. Such an amount of desquamation, the author says, he has never seen in a new-born child. The micrococci of erysipelas could not be found in the placenta, and the results of culture experiments were negative.

IBID. Max Runge (*Ibid.*, No. 48).—The writer details a case, closely similar to that of Kaltenbach's. In both cases the temperature was not excessive for erysipelas, and the mothers showed distinct desquamation at the time of delivery. In Runge's case the child was premature, and was born 13 days after the cessation of the mother's feverishness. In this case no examination was made for micrococci, as the case occurred before these organisms were known.

EMBOLISM OF THE PULMONARY ARTERY DURING THE PUERPERIUM. Kenezy (*Ibid.*)—A patient of 27 years was removed 3 hours after her second confinement to a ward, and as the bed was cold, she made some restless movements, and became suddenly breathless, with cyanotic face and lips and blood-stained sputum. There was great collapse with cold extremities, vomiting and pain in the chest. Absolute rest was enjoined, and subcutaneous injection of morphia was used. She improved, but in the evening she took a similar attack, and became very restless. Next day there was extensive pulmonary œdema. Injection of ether was employed, and by the end of a fortnight the patient had recovered.

ON PUERPERAL PEPTONURIA. Fischel (*Ibid.*)—As a result of his examination of fifty-six patients post-partum, the writer finds that during the first twelve hours there are no peptones, that they usually appear at the end of the first day; that on the second and third day their presence is almost constant; that they remain pretty general from the fourth to the sixth day; that from the seventh to the tenth day they are present in half the cases; and that after the tenth day they are absent. Further, that in cases where the involution of the uterus proceeds rapidly they disappear earlier, and that in a case of Porro operation they were entirely absent. From all these results, Fischel argues that peptonuria is a regular physiological phenomenon during the puerperium. By a series of further observations the writer excludes the possibility of the peptonuria arising from suppuration in the genital tract; and grounding upon these, as also upon the results of experiments which he made on animals, he comes to the conclusion that peptonuria results from the degeneration of the muscular tissue of the uterus dependent upon uterine contractions. He further examined the urine of many patients during pregnancy, and found in a quarter of his cases that peptonuria was present. This he attributes to the presence of uterine contraction during pregnancy.

PEPTONURIA IN CASES OF BURST OVARIAN CYSTS (Otto Küstner).—A case is related where, during examination under chloroform, a small ovarian tumour was burst. In the urine, shortly after the accident, a trace of peptones was noticed, but on the second and third day the quantity was decided. The nature of the case was made certain at the subsequent operation. The writer records it as an aid in the diagnosis of rupture of ovarian cysts.

ON THE DIFFICULTY OF DIAGNOSIS OF FŒTAL HYDROCEPHALUS AND THE FREQUENCY OF UTERINE RUPTURE IN SUCH CASES. Schuchard (*Ibid.* [extract], No. 48).—The writer founds his paper on 57 collected and 16 original cases. Of these 73 cases, 52 were head presentations, 21 were pelvic. As the result of a delayed diagnosis of the condition, 13 maternal deaths occurred, 12 of them being due to uterine rupture. Two other cases of rupture occurred, in which, however, the patients recovered. Eight of the ruptures were spontaneous. Six resulted after forcible efforts with the forceps. The writer refers to 10 cases where delivery was naturally accomplished, in two of which living children were born. Live birth also occurred in one case of forceps application, one case of expression, one case of puncture and forceps, and one case of simple tapping. In the last case the child lived six weeks.

ON THE USE OF COCAINE AS AN ANÆSTHETIC FOR THE GENITAL PASSAGES. Fränkel (*Ibid.*, No. 49).—The writer found that it was necessary to use a solution of 20 per cent., made with one of muriate of cocaine, three of distilled water, and two of rectified spirits. His observations were of the nature of experiments. He first carefully dried the mucous membrane, and then three or four times, at intervals of two minutes, applied the solution with a brush. He summarizes the following indications for its local use:—1. For anæsthetic purposes, before the application of caustics, in acute vulvitis, colpitis, for the removal of superficial growths, as condylomata or urethral caruncles, or in very sensitive individuals for cauterization of the vaginal portion, or perhaps for curetting the interior of the uterus. 2. For lowering the reflex irritability in cases of vaginismus or in cases of anal fissure; in the latter affection he suggests that the cocaine may be used either as an anæsthetic during a forcible dilatation, or habitually before the bowels are moved.

ON PERINEAL OPERATIONS. Schmidtmann [abstract] (*Ibid.*, No. 49).—The author draws attention to two factors which operate against the healing process after repair of a torn recto-vaginal septum. 1. The passage of gases through the new sphincter. 2. Imperfect adaptation of the pared surfaces, due to the badly directed tension exerted by the stitches. These two difficulties he overcomes—(1st), by securing into the rectum a tube 3 centimetres diameter, which he leaves until the bowels are moved on the 10th or 12th day; and (2nd), by the introduction of one or two stitches, passing from the rectum into the vagina at a considerable distance from the line of union, which are intended to overcome the action of the transversus perinei muscle.

Part Fifth.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held in May 1885, and were admitted L.R.C.P & S. Ed.:—Chandos William Hoskyns-Abrahall, Edinburgh; Robert Adams, Antrim; Bhola Natte Basu, Aberdeen University; Edward George Byrne, Cork; John Davies, Liverpool; Charles Lachlan Frasor, Helensburgh; William Pape Baldwin Goodridge, Dorset; Richard David Hartland, Cork; Arthur Mary Fraser, Colchester; Denis Hassett, Knockaturney, Co. Waterford; M. M. Hailey, Bucks.; Alfred Oram Honnywill, Rochester; Louis Edgar, Edinburgh; Robert Henry Farry, Llandegla, Wales; Thomas Roberts Rigsdale, Co. Cork; William Vaughan Roberts, Bethania, Festiniog, North Wales; Richard Arthur Scott, Yorks; Albert Edward Tunstall, Darlington; Henry Huybertz, Edinburgh; Arthur Robert Steel, London, W.; Thomas Weir, Glasgow; James Hay Caird, Fasskane; Patrick Walsh, Co. Cork.

Royal Colleges of Physicians and Surgeons, Edinburgh, and Faculty of Physicians and Surgeons, Glasgow.—The following gentlemen passed their final examination for the triple qualification in medicine and surgery at the sittings held on 5th May 1885, and were admitted L.R.C.P. & S. Ed. and L.F.P. & S. Glasgow:—George Lindsay Bonnar, Edinburgh; Walter Godfrey Axford, Surrey; George Stanley Barstow, Pontefract; Charles Edward Hollings, Yorkshire; Edgar Montgomery Inglis, Edinburgh; David James Mason, Edinburgh; Sydney Partridge, Edinburgh; John Maynard Rekthall Hollinghurst, St Leonards-on-Sea; John Sherry, Co. Clare; Peter Harold Salter, Edinburgh; Henry E. Shadwell, Devonshire; H. P. Shuttleworth, Southsea; Ernest Frederic Taylor, Yorks.; Fitzgerald George Westenra, Edinburgh.

Royal College of Physicians, Edinburgh.—The following gentleman passed his final examination for the qualification in medicine at the sitting held on 8th May 1885, and was admitted L.R.C.P. Ed.—William Kirman Pauli, Bedfordshire.

Royal College of Surgeons, Edinburgh.—The following gentlemen passed their final examination at the sittings held in May 1885, and were admitted L.R.C.S. Ed.—Henry William Dixon, Darlington; Albert William Beaumont, London; Eugene Crowley, Co. Cork; Alex. MacDonnell, London; John Digby Marsh Swinburne, London.

University of Edinburgh.—*First Professional Examination.*—The following is the official list of candidates who have passed the above-named examination:—C. M. Anderson, R. H. Beardsley, J. J. Bennetts, H. E. Bower, Donald Brims, J. K. Browne, Leonard Bryson, F. H. Carlyon, G. A. Casalis, H. F. T. Chambers, L. E. Coméra, W. T. Crawford, E. C. Cridland, J. S. Davies, F. A. Day, Herbert Dobie, R. J. Drummond, A. S. Edwards, J. W. Edwards, J. A. Ewan (M.A.), C. C. Fleming, J. W. Forbes, W. R. Forbes, J. G. Gillespie (M.A.) (with distinction), T. Graham, E. E. T. B. Greville, V. B. Harley, Alex. Henderson, T. L. Johnston, Olaf Kloster, J. E. Kuhne, L. T. Lancaster, S. F. Lautrè, W. G. Laws, William Lawton, R. S. Lee, A. D. Louttit, Donald M'Bean, Daniel MacLeod, James M'Nidder, K. A. Matheson, Kenneth Maxwell, G. E. Morrison, C. D. Musgrove, J. T. C. Nash, C. H. L. Palk, Julius Petersen, T. D. Poole, R. R. Richardsou, Richard Richmond, Duncan Robertson, Robert Robertson, J. G. C. Scott, R. G. Scott, Ebenezer Shaw, J. F. Smith (M.A.), R. A. Smith, J. W. Somerville, F. N. Stewart, G. N. Stewart, James Stoddart, Samuel Tully, F. R. Turton, R. B. Wallace, Frederick Watson, J. W. Watterson, R. W. West, Andrew Westwood, T. B. White, J. G. Williamson, William Wilson, Robert Wise, and F. S. Zaytoon.

University of Edinburgh.—The following is the official list of those gentlemen who have passed their second professional examination:—Andrew Aikman, Edmund Antrobus, J. A. Armitage (B.A.), R. Ayshford, W. H. Bansall, A. E. Barlow, Victor Black, E. G. Blanc, Alfred Borradaile, F. L. H. Brown, C. G. Campbell, E. W. W. Carlier, E. C. Carter (with distinction), J. A. Clark, F. H. Clarke, John Cockton, W. S. Counsell, Wm. Craig, James Cunningham, John Cunninghame, A. L. Curtis, E. C. S. Daniel, G. Scott Davidson (M.A.), J. H. Deamer, Arthur Drury, J. C. Dunlop, G. G. Eyre, E. H. Ezard, Ahmed Fahmy, W. J. Fairlie, Oliver Field (with distinction), N. S. Fraser, Peter Fraser, John Galletly, R. P. R. Gordon, James Graham, T. P. Gray, E. A. Hall, J. F. Haswell, Thomas Henderson, W. R. Hill, Archibald Hood, H. C. Hughes, J. C. Hughes, C. W. Hunter, T. B. Hyslop, R. W. Inkster, R. Jackson, Robert Jardine, F. H. Jeffcoat (with distinction), J. J. Johnson, Obi. Johnson, Benjamin Jones, S. B. Jones, C. P. Kennard, H. R. Kenwood, W. H. E. Kanggs, J. Lamrock, A. T. Law, C. S. A. Leggatt, J. D. Leigh, P. A. Lindsay (with distinction), Edward Linton, H. H. Littlejohn, D. C. A. M'Allum, Wm. Macansh, T. F. M'Farlane, Thomas Mackenzie (M.A.), W. A. Mackintosh, H. H. Marshall, J. D. Menzies, H. S. van der Merwe, R. H. Mitchell, Thomas Morris, Andrew Morrow, Wm. Murphy, James Musgrove, F. A. Neal, William Nicholson, John Pirie, G. H. Pollard, G. Y. Polson, H. P. Prankerd, Alex. Primrose, E. V. Roberts, H. L. Roberts (with distinction), R. G. Roberts, A. A. Robinson, J. K. Robinson, B. S. Robson, John Ross, John Ross, A. R. P. Russell, J. S. R. Russell, S. R. Savage (B.A.), H. C. L. Scofield, Arthur Sellers, R. F. Shepherd, J. C. Simpson, G. T. Sinclair, E. W. Skinner, R. W. Smeddle, J. L. M. Smith, James Smith, A. C. Smyth, D. G. Sutherland, G. A. Sutherland, Wm. Symington, A. H. Taylor, C. C. Teacher, Griffith Thomas, Andrew Thomson, F. W. Thomson (M.A.), A. L. S. Tuke, W. H. Turton (with distinction), C. M. Tyrell, H. W. Vernon, T. H. Ward (with distinction), Percy Wardle, G. A. Watson, J. A. Wetherell, A. D. Wilson, George Wilson, W. B. Wilson, W. C. Wilson, Arthur Wood, W. F. Wright, E. B. Young.

We understand that Dr William W. Ireland, formerly of H.M. Indian Army, has in the press a work entitled *The Blot upon the Brain: Studies in History and Psychology*, which should prove highly interesting, not only to medical men, but also to non-professional readers. The *Studies* embrace such subjects as Hallucinations, especially of Sight and Hearing; the Hallucinations of Mahomet, Luther, Joan of Arc, and Swedenborg; the Insanity of the Cæsars, Mohammed Toghlak, and Ivan the Terrible; on St Francis Xavier; Thought without Words; Fixed Ideas; Left-handedness; the Functions of the Double Brain; etc.

PUBLICATIONS RECEIVED.

John Abercrombie, M.D., etc.,—Students' Guide to Medical Jurisprudence. J. & A. Churchill, Lond., 1885.

T. C. Allbutt, M.A., etc.,—On Scrofulous Neck. J. & A. Churchill, Lond., 1885.

Dr W. J. Behrens,—Text-Book of General Botany. Young J. Pentland, Edin., 1885.

T. Lauder Brunton, M.D., etc.,—A Text-Book of Pharmacology, Therapeutics, and Materia Medica. Macmillan & Co., Lond., 1885.

C. W. Cathcart, M.A., etc., and F. M. Caird, M.B., etc.,—Students' Atlas of Bones and Ligaments. W. & A. K. Johnston, Edin., 1885.

Edward Cotterell, M.R.C.S. Eng., etc.,—On Some Common Injuries to Limbs, etc. H. K. Lewis, Lond., 1885.

W. B. Dalby, F.R.C.S.,—Lectures on Diseases and Injuries of the Ear. J. & A. Churchill, Lond. 1885.

G. E. R. Ellis,—Introduction to Practical Organic Analysis. Longmans, Green, & Co., Lond., 1885.

V. M. Holt,—Why not eat Insects. Field and Tuer, Lond., 1885.

Peter Hood, M.D.,—Gout, Rheumatism, and the Allied Affections. J. & A. Churchill, Lond., 1885.

Jonathan Hutchinson, F.R.S.,—Illustrations of Clinical Surgery. J. & A. Churchill, Lond., 1885.

Juan Gelpi y Jofre,—Tratado Iconografico de les Enfermedades Externas del Organo de la Vision. Barcelona, 1885.

B. W. Richardson, M.D., etc.,—The Asclepiad. Vol. ii., No. 6. Longmans, Green, & Co., Lond., 1885.

John B. Roberts, A.M., M.D., etc.,—Surgical Delusions and Follies. P. Blakiston, Son, & Co., Philad., 1885.

J. Davies Thomas, M.D., — Hydatid Disease of the Lungs. H. K. Lewis, Lond., 1884.

J. Davies Thomas, M.D., — Hydatid Disease, with Special Reference to its Prevalence in Australia. H. K. Lewis, Lond., 1884.

Transactions of the New York State Medical Association. Vol. i. D. Appleton & Co., New York, 1885.

Dr Victor Weber,—The Sulphur Baths of Alveneu. Orell Fussli & Co., Zurich, 1883.

Sir Spencer Wells, Bart., — Diagnosis and Surgical Treatment of Abdominal Tumours. J. & A. Churchill, Lond., 1885.

T. G. Wormley, M.D., etc., — Micro-Chemistry of Poisons. J. B. Lippincott Company, Lond., 1885.

PERIODICALS RECEIVED.

Albany Medical Annals,—Feb., March.
Alienist and Neurologist,—Jan.–April.
American Journal of the Medical Sciences,—April.
American Journal of Neurology and Psychiatry,—April.
American Journal of Obstetrics, — Feb.-May.
American Druggist,—Feb.-April.
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Analectic,—Dec.
Annales de Dermatologie et de Syphiligraphie,—Jan.-April.
Annales d'Oculistique,—Jan.-March.
Annales Medico-Chirurgicales,—Mar., April.
Archives Générales de Médecine,—Mar.-May.
Archives de Tocologie,—March-May.
Archives of Pediatrics,—Feb.-April.
Archivio Internazionale di Otojatria, Rinojatria ed Aeroterapia,—Jan. 15.
Archivio di Ortopedia,—April.
Australasian Medical Gazette,—Jan.-March.
Bericht über die Allgemeine Deutsche Ausstellung auf dem Gebiete der Hygiene und des Rettungwesens,—Band I.
Berliner Klin. Wochenschrift,—Feb. 23-May 18.
Birmingham Medical Review,—March-May.
Births, Deaths, and Marriages, Monthly Return of,—Feb.-April.
Do., do., Quarterly Return,—March.
Bollettino della Societa tra i Cultori delle Scienze Mediche in Siena,—Jan.
Boston Medical and Surgical Journal,—Feb. 12-May 7.
Brain,—April.
Bristol Medico-Chirurgical Journal,—Mar.
British Medical Journal,—Feb. 28-May 23.
British Gynæcological Journal,—April.
Bulletin Général de Thérapeutique,—Feb. 28-May 15.
Centralblatt für Chirurgie,—Feb. 21-May 16.
Centralblatt für Gynäkologie,—Feb. 21-May 16.
Centralblatt für die medicinischen Wissenschaften,—May 2.
Detroit Lancet,—March, April.
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Dublin Journal of Medical Science,—Mar.-May.
Ephemeris of Materia Medica, etc.,—March.
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